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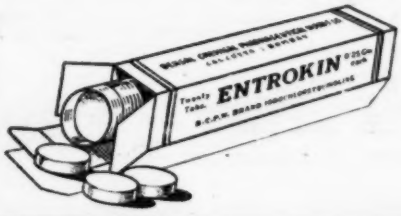


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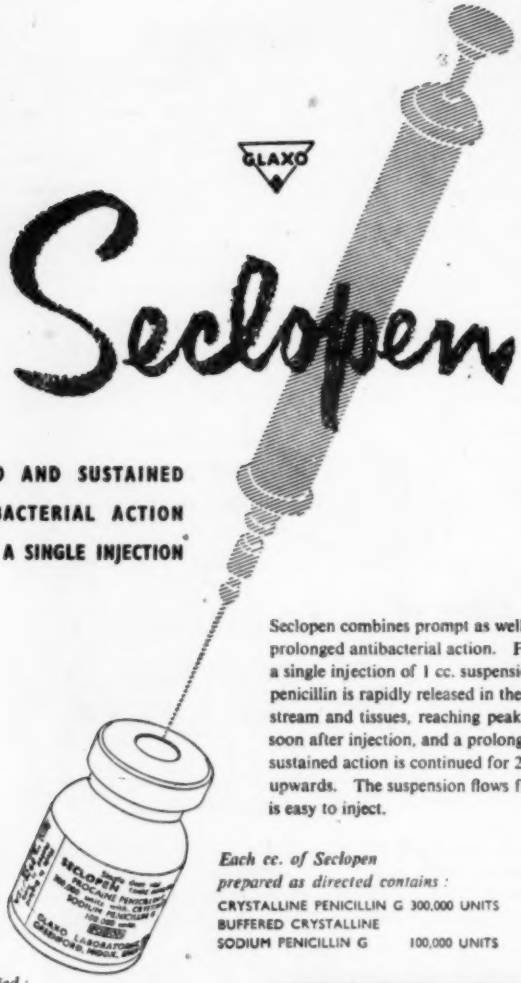


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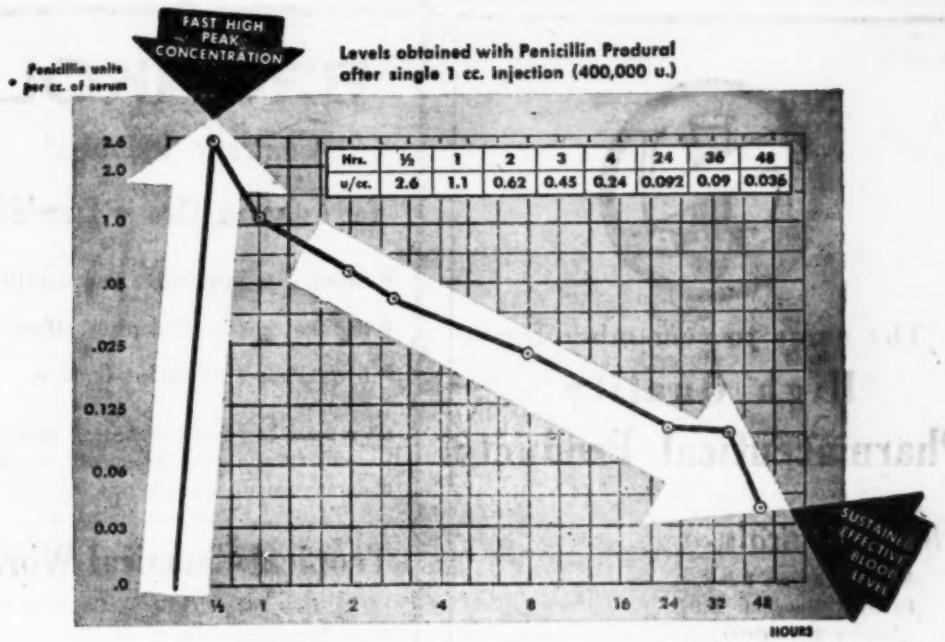


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1. Niedelman, M. L.; Pierce, H. E., Jr.; Heffstein, L. D., and Matteucci, W. V.: Am. J. Syph., Gonor. & Ven. Dis. 35:482 (Sept.) 1951.

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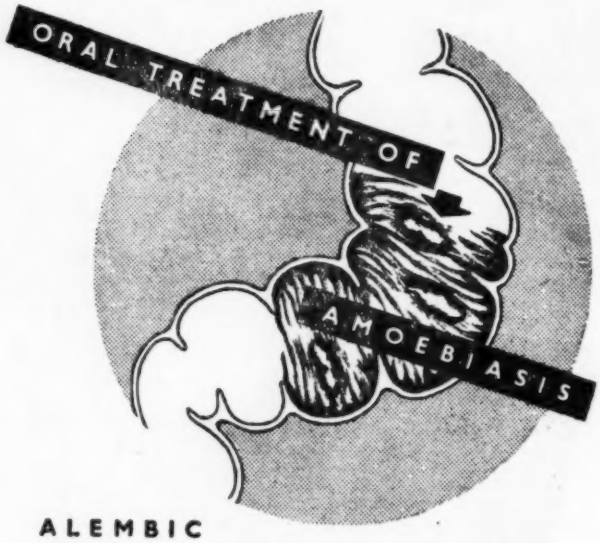


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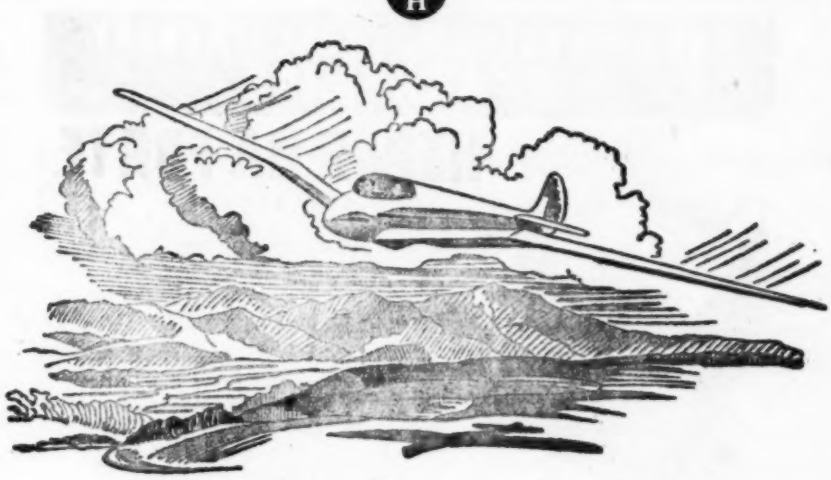

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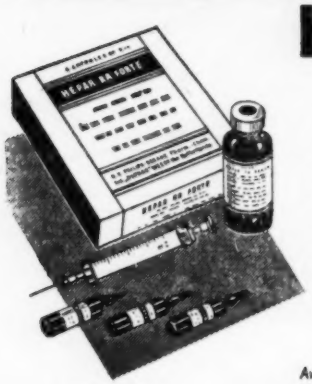

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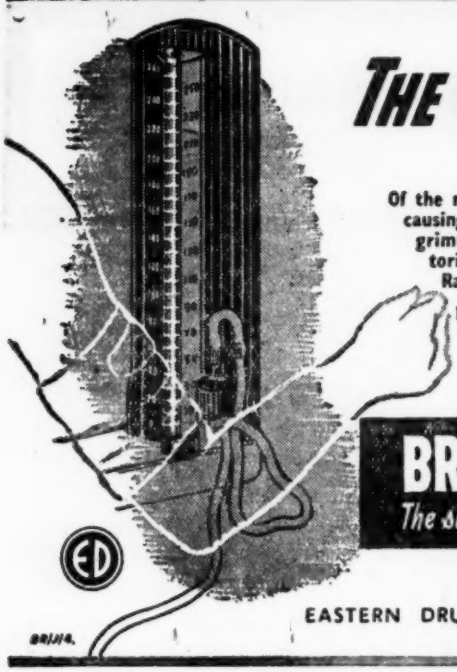

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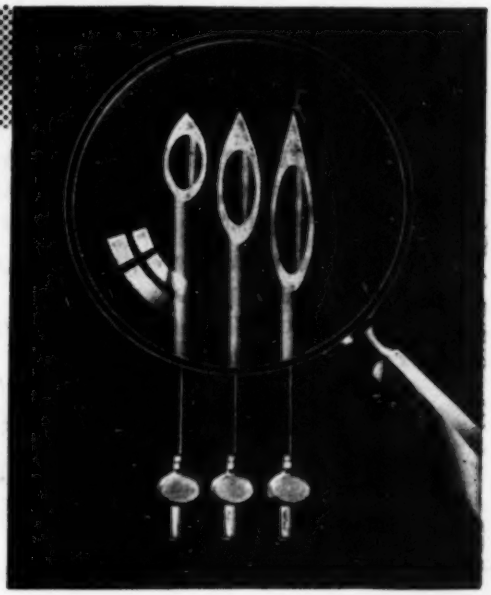

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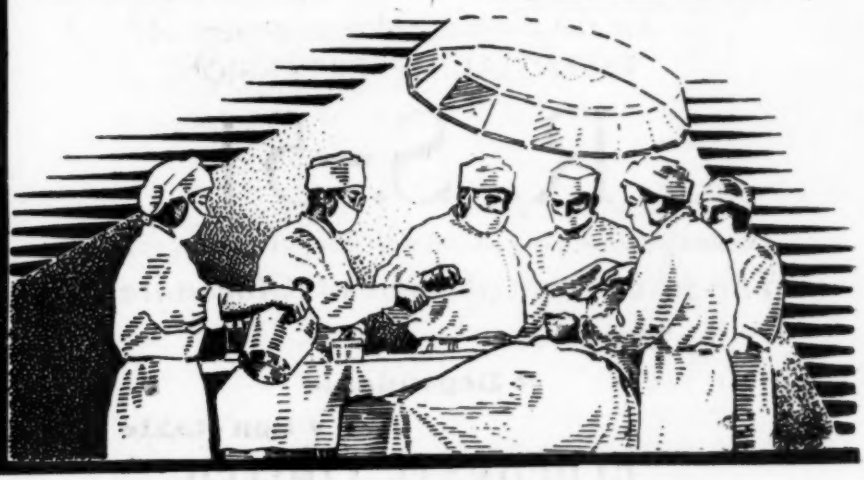

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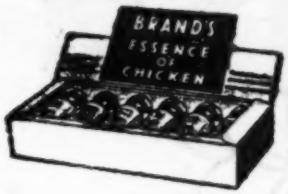


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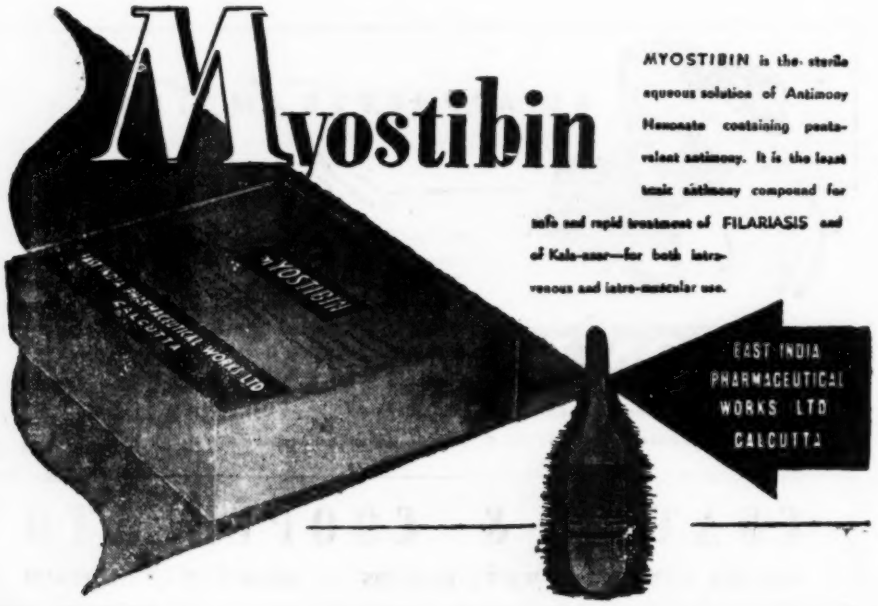


# Journal of the Indian Medical Association

VOL. XXI. NO. 11 CALCUTTA AUGUST, 1952

*ORIGINAL ARTICLES*

## HEREDITARY ECTODERMAL DYSPLASIA
### With Report of Three Cases of the Anhydrotic Variety

LAURA L. LIPSCOMB, M.D.,
*Associate Professor of Pediatrics*
AND
K. MANONMANI, M.B., B.S.,
*Registrar, Department of Pediatrics*

*Christian Medical College, Vellore, South India*

There are two forms of hereditary dysplasia of ectodermal tissues. Both are said to be very uncommon. When fully developed, one type perspires freely and the other does not; so they have been called the hydrotic and anhydrotic types, respectively.

The anhydrotic variety occurs much more rarely than the hydrotic. It is generally stated that the first case was described by Thurman (1848) in England and only about 80 cases have been described up to the present time. However, according to Darwin (1894) a description of this syndrome was given by Widderburn (quoted by Darwin *loc. cit.*) in 1838 in 10 male members of a Hindu family. Weech (1929), summarised 9 cases from the literature and added two others. He was apparently unaware of the Widderburn report. Weech did, however, call attention to a preliminary report by Thadani (1921) of a type of men occurring in the Hindu Amil Community of Hyderabad, Sind, who showed absence of teeth, bald head and unusual sensitivity to heat. Weech stated that although the information given was meagre, the description was probably sufficient to identify them as persons afflicted with the anhydrotic form of ectodermal dysplasia. Thus it appears from the literature that this syndrome may be more common in India than in other parts of the world.

#### CASE REPORTS

The first two cases are sisters. A third girl of this family (the first born child) had ectodermal dysplasia. She died of an undiagnosed febrile illness at 12 months of age. At birth it was noted that she had no scalp hair except for a very scanty growth over the occiput, no eyebrows or eyelashes and that her skin was dry and thin. Up to the time of her death she still had only a little "fuzz" over the occiput, no eyebrows and very scanty eyelashes; no teeth had erupted. The parents had noted that the child never seemed to perspire but she had no apparent fever until the terminal illness. The second child of this family is a boy who is now 12 years old and quite well with no evidence of ectodermal dysplasia. The third child is female, 10 years old and entirely normal. The fourth and fifth children are the patients reported here. The sixth child is a boy who is now 4 months of age and well.

The father of these children married his own sister's daughter. A careful analysis of the family history has failed to reveal any evidence of ectodermal dysplasia in any other member of the family. The family history is otherwise negative except for asthma in the mother, the maternal grandfather and in two paternal first cousins. A paternal aunt has migraine. The paternal grandmother died of diabetes mellitus.

*Case* 1.—R., 7 years of age. At birth this child was noted to have defects strikingly similar to those of her sister who died at one year of age. She had no scalp hair except for a little "fuzz" along the midline of the scalp between the anterior and posterior fontanelles, no eyebrows or eyelashes and her skin appeared finely wrinkled and very thin (this was especially marked on the face). She seemed otherwise normal and had no special difficulties until the seventh month of life when she developed fever, irritability and anorexia (this was in May at the beginning of the hot season). These symptoms continued with fever ranging from 100 to 104°F. (R) for the following four months. During this period she was admitted for one month to a local hospital for study, but no cause for the fever was ever ascertained. With the onset of cooler weather the child became afebrile and began to gain slowly in weight. During the succeeding three hot weather seasons she had similar, but somewhat less severe, febrile illnesses lasting for 6 to 8 weeks. In the second and third febrile periods the child had several convulsions apparently due to hyperpyrexia.

At one year of age the patient developed a sparse growth of hair over the entire scalp. Her first teeth (the upper lateral incisors) erupted at 11 months of age. When she was 2½ years old, two lower first molars erupted. She had no further teeth until the upper and lower 6 year molars erupted at about 6½ years of age.

Since this child was about 1½ years old, she has had a great deal of discomfort in regard to her nose. She had much crusting, some intermittent nasal bleeding and at very frequent intervals a foul smelling, purulent discharge. This constituted one of the major complaints of both the patient and her parents.

The intolerance to heat manifested by this patient has been very marked and her life has been quite miserable in

each hot weather season. She learned very early that keeping her clothes wet greatly minimized her discomfort. She strips and takes many "pour" baths a day in the hot weather. At night in the hot season she sleeps on a dampened mat on the floor with a small wet sheet thrown over her. She awakens on an average of 3 to 4 times a night when the weather is hottest, takes a pour bath, resprinkles the mat and redampens the sheet. During the last hot season the family acquired an electric fan and the child's nights were thus made much more tolerable. The parents have never noted any evidence of perspiration on any part of the child's body, at any time.

Because of the child's difficulties, she was not started to school until a few months ago. She is now doing good work in the first grade. If the weather is very warm she has to leave the classroom about once each hour to bathe her face and arms in cold water. She carries a large wet handkerchief with her all of the time which she uses to keep her face and neck moist. When the weather is cool the child walks the 2 furlongs from her home to the school. In warm weather she is not able to do this but lives with an aunt whose home is close by the school grounds. She enjoys and participates in most of the activities of the children of her own age. However, even in cool weather, if she engages in very strenuous physical exercise, she soon feels very tired and as if she is "burning up."

PHYSICAL EXAMINATION.—Height 44½". Head circumference 18⅜". Weight 34 lbs. B.P. 95/67.

A small, thin, active, mentally alert 7 year old girl, with a very pleasing manner and an almost perpetual smile. The facial features were quite striking (Fig. 1).

No eyebrows were present and the eyelashes were very sparse. There was slight depression of the nasal bridge. The mouth appeared small and the lips had a somewhat ovoid configuration. The skin of the face, especially about the eyes and the corners of the mouth, appeared very thin and finely wrinkled. The ears stood out at an oblique angle from the head.

The scalp hair (Figs. 2 and 3) was about 2·5 cm. in length and "stood straight up" all over the head (it was clipped close about 4 months ago). The hair was thick but fairly uniform in distribution over the entire scalp. It was dark brown in colour.

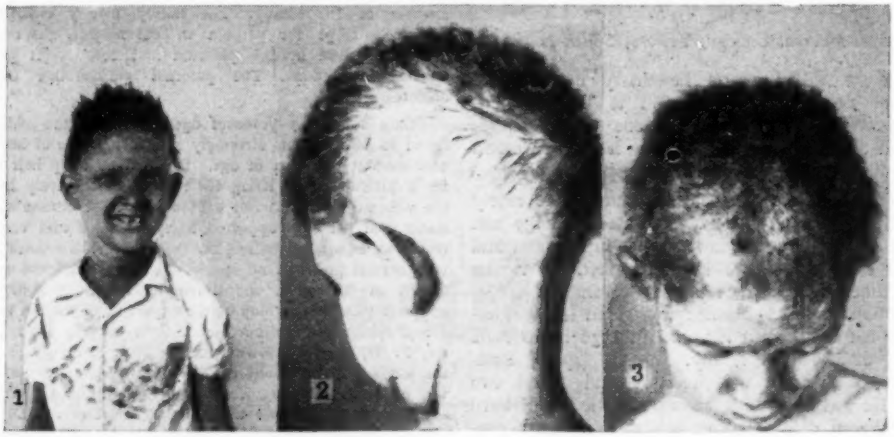



FIG. 1 (CASE 1)—SHOWING GENERAL FACIAL FEATURES, ABSENCE OF EYEBROWS AND RATHER THICK, EVERTED LIPS
FIGS. 2 AND 3 (CASE 1)—TWO VIEWS OF THE HEAD. THE HAIR IS DRY AND THIN BUT FAIRLY UNIFORM IN DISTRIBUTION OVER THE SCALP

Only eight teeth have erupted. In the upper jaw there were two peg-shaped incisors (Fig. 4) and two six-year molars. In the lower jaw there were only two first molars and two six-year molars.

The skin over the entire body was thin and dry, but appeared much more atrophic and finely wrinkled on the face than elsewhere. The only body hair present was a scant growth along the sides of the face and back of the neck. The nose was rather small with a slightly depressed nasal bridge. The mucous membrane appeared atrophic.

There was no abnormality of the nails or mammæ.

The remainder of the physical examination was not remarkable.

LABORATORY EXAMINATION AND SPECIAL STUDIES.—The total white blood count was 14,000 with a normal differential. There was no anæmia. Urine and stool examinations were entirely negative. The blood Kahn and the Mantoux test (P.P.D. 5 test units) gave negative results. Chemical examination of the blood revealed 210 mgm. of cholesterol per hundred cubic centimetres of serum; 9·1 mgm. of calcium per hundred cubic centimetres of serum; 4·5 mgm. of inorganic phosphorus per hundred cubic centimetres of serum. The erythrocyte sedimentation rate was 12 mm. the first hour and 25 mm. the second hour (Westergren method).

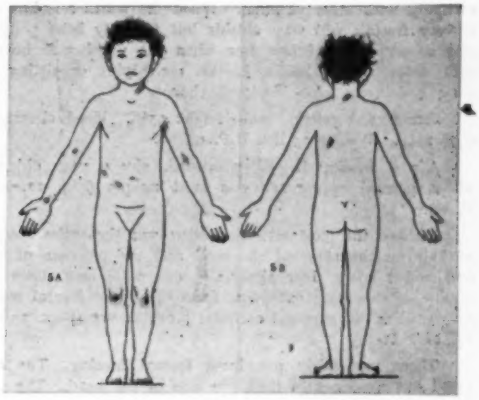
Roentgen examination showed an absence of unerupted teeth in the jaws; no abnormality of the skull.

FIG. 4 (CASE 1)—SHOWING THE TWO PEG-SHAPED UPPER INCISORS. NO LOWER INCISORS ERUPTED

BIOPSY SPECIMENS.—(1) In the section of skin and subcutaneous tissue from the left axilla (Fig. 6, *vide* Plate), the epidermis appeared thinned out in places. The dermis contained a few capillaries surrounded by lymphocytes. There were numerous sweat and sebaceous glands. (2) Skin and subcutaneous tissue from the right antecubital fossa showed some flattening of the rete pegs and slight parakeratosis. The subepidermal layer contained many perivascular collections of lymphocytes. There were no sweat or sebaceous glands (Fig. 7, *vide* Plate). (3) The section of the nasal mucosa showed stratified epithelium that was transitional in appearance except in one area where it looked somewhat squamous. The connective tissue was infiltrated with lymphocytes and plasma cells. There were a few small glands present with atrophic epithelium and no evidence of secretory activity.

To test the patient's reaction to a raised outside temperature, she was put in an environment with a temperature varying between 101·5 and 102°F. Within 15 minutes her mouth temperature had risen from 99 to 101·6°F. In 30 minutes it was 103°F. and she was extremely uncomfortable. No moistness of the skin was felt anywhere. Ten minutes after being removed to a temperature of 85°F, her mouth temperature had dropped to 102·4°F and 55 minutes later it had reached the normal pre-test figure.

The starch-iodine sweating test following the technique of Minor (1927) was done to ascertain the degree of sweat gland activity. A dilute alcoholic iodine solution containing a small amount of castor oil was first applied to the anterior part of the child's body. After this had thoroughly dried, powdered corn starch was generously dusted over the whole area. The patient was then placed in a heat cradle and kept there until the body temperature had risen to 102°F by mouth and remained between 102 and 102·3°F for 15 minutes. There were only a very few scattered areas of bluish discoloration denoting sweat gland activity. These are indicated in Figs. 5A and B.




FIGS. 5A AND B (CASE 1).—THE SHADED AREAS REPRESENT THE SITES IN WHICH BLUISH DISCOLORATION DENOTING SWEAT GLAND ACTIVITY WAS OBSERVED IN THE STARCH-IODINE TEST

*Case* 2.—M., 4 years of age and the sister of the child in Case 1. At the time of birth this patient was observed to have no eyebrows or eyelashes, a thin, finely wrinkled skin and the scalp hair limited to a very small amount along the midline from the anterior fontanelle to the posterior occipital protuberance. This child had a very uneventful first year of life. She grew and gained in weight in a satisfactory manner. At one year of age she was walking and was able to say 2 or 3 words.

Her first teeth erupted at 11 and 12 months of age—the two upper central incisors. At 14 months of age two other teeth erupted somewhat lateral to the central incisors. She had no further teeth until within the past 6 months when two upper and two lower first molars appeared. At about 14 months of age her scalp hair began to grow in length but has remained only over about a 3 cm. area along the midline of the scalp.

At about 1 year of age this child first began to have nasal difficulties with the formation of thick crusts in the nose and a foul smelling nasal discharge that has been more or less constant up to the present time. The parents first became aware of depression of the nasal bridge when the child was about 1 year old.

This patient has had no long upsetting febrile periods such as her sister had in her early life. This may be in large part due to the experience the parents gained, through dealing with the older child, in the prevention and alleviation of these difficulties. The child has also never been observed to perspire at any time. She is very fretful in the hot season, and as early as 1½ years of age began to pour cups of water over herself—clothes and all—when she was hot. Like her sister, this patient, in the hot season sleeps on the floor on a straw mat that has been sprinkled with water and she has a wet sheet over her. Before the family acquired the electric fan, the mother was up on an average 4 to 5 times each night during the hot weather to give this child a "pour" bath. With the fan, she has to be up for this procedure once or twice per night. In the cold season she usually sleeps the night through.

In cool weather this patient is quite active and plays normally with other children. When the weather is hot she is very fretful, will stay outside but for only brief periods. She spends most of her time when the weather is hottest with dolls, picture books, blocks, etc., lying or sitting on dampened straw mats inside the house.

PHYSICAL EXAMINATION.—Height 35¼". Head circumference 17¼". Weight 25 lbs. B.P. 90/60.

A well developed, well nourished, shy 4 year old girl whose general appearance was most unique (Fig. 12, *vide* Plate).

Perhaps the most striking feature was the entire absence of hair on the sides of the head and the presence of long and rather sparse hair along a 3 cm. wide area down the middle of the scalp extending from the upper frontal region backward to the external occipital protuberance (Figs. 13 and 14, *vide* Plate).

There was fairly prominent frontal bossing. The ears stood out prominently from the side of the head. The eyebrows were entirely absent and the eyelashes were few in number and short. The nasal bridge was markedly depressed. The mouth looked rather small and the lips had a somewhat puckered, ovoid appearance (Fig. 15, *vide* Plate).

When the child smiled, four very sharp-pointed teeth in the anterior part of the upper jaw were visible (Fig. 16, *vide* Plate). No decision could be made as to whether the more lateral of these teeth should be classified as canines or incisors. She had also two upper first molars. Only two first molars had erupted in the lower jaw.

The skin over the entire body was very thin, smooth and dry. These changes were most marked in the face where the skin had a parchment-like, senile appearance especially about the mouth and eyes. There was no abnormality of the nails or mammæ.

The external nares were almost blocked with heavy crusts and mucopurulent material. The mucous membrane appeared very hypoplastic.

The remainder of the physical examination was within normal limits.

LABORATORY EXAMINATION AND SPECIAL STUDIES:—The total blood count was 14,300 with a normal differential. There was a moderately severe hypochromic, microcytic anæmia. Urine and stool examinations gave negative results. The blood Kahn and the Mantoux test (P.P.D. 5 test units) were negative. Chemical examination of the blood showed 225 mg. of cholesterol per hundred cubic centimetres of serum; 3·98 mg. of inorganic phosphorus per hundred cubic centimetres of serum; 9·1 mg. of calcium per hundred cubic centimetres of serum. The erythrocyte sedimentation rate was 13 mm. the first hour and 32 mm. the second hour (Westergren method).

Roentgen examination showed the presence of four unerupted six year molars; no abnormality of the skull.

BIOPSY SPECIMENS.:—(1) In the section of skin and subcutaneous tissue from the left axilla the epidermis appeared hyperplastic in places. The subepidermal layer contained occasional sebaceous glands but no sweat glands (Fig. 8, *vide* Plate). (2) Skin and subcutaneous tissue from the posterior neck region showed the epidermis to be irregular and hypertrophic in some places. The dermis consisted of loose connective tissue with some perivascular collections of lymphocytes. There were no sweat or sebaceous glands (Fig. 9, *vide* Plate). (3) The nasal mucosa consisted of a layer of stratified epithelium, apparently ciliated in places, and beneath it a loose connective tissue that was infiltrated with lymphocytes, plasma cells and eosinophils. There were some dilated glands, that were lined by atrophic epithelium and showed no evidence of secretory activity (Figs. 10 and 11, *vide* Plate).

To test the patient's reaction to a raised outside temperature she was put in an environment with a temperature varying between 101·5 and 102°F. In 20 minutes the child's rectal temperature rose from 100°F to 102·8°F and 10 minutes later it was 103·8°F. She became extremely fretful and demanded to be removed though considerable efforts were made to entertain her. She was carefully examined for evidence of perspiration but no moistness was felt anywhere over her body. Ten minutes after coming out to a temperature of 85°F her rectal temperature was 103·6°F and after one hour it was down to 101°F. Two hours later it had dropped to 99°F.

*Case* 3—B. C., a eleven year old South Indian boy was brought in for work up with the chief complaint of "fever most of the time since infancy".

He was the oldest of 3 siblings. His brothers and his mother and father were well. The family history was negative for any evidence of ectodermal dysplasia, except that two maternal uncles were said to have light coloured hair.

The patient had never been robust, but since infancy he had had no significant illness. At 6 months of age he had a febrile illness lasting about 3 months. During this period he was seen by several doctors who finally diagnosed "liver disease". At 5 years of age he had mild pertussis.

The patient's father was chiefly concerned because the child's body so often felt unusually hot, "as if he is feverish" The temperature had been frequently taken and often found to be 2-3 degrees above normal. However, the child had not seemed actually ill at the time and the temperature would usually drop to normal within an hour or so, if he were only kept moderately quiet and in a cool place. The family had noted that the patient had much more difficulty in the "hot weather" season. During the hot part of the day, he was often irritable, anoretic and disinclined to any active task or play. At night, during the hot season, he could sleep only if he were naked and directly under a ceiling fan.

Because the father feared that the child might have tuberculosis he had been seen by several doctors. No cause for the fever had been found. One doctor thought that the tonsils might be a possible focus of infection and suggested they be removed. Tonsillectomy was never performed, however, because the E.N.T. consultant felt that there was not sufficient evidence to incriminate the tonsils as cause for the difficulty.

The patient had never been able to engage in the more active sports because he got short of breath and felt weak if he ran very much. When he read aloud his throat soon began to feel scratchy and he had the sensation of needing to clear it repeatedly. He had a little cough at such times but at no other. He had never liked hot foods or highly seasoned foods, both made his mouth sting and he felt "hot all over"

The boy and his parents have noted that he did not perspire normally. Even in the hottest weather his clothes were never damp but slight moistness was sometimes felt under the arms, in the antecubital fossæ and behind the knees. The patient's lower incisors and upper lateral incisors

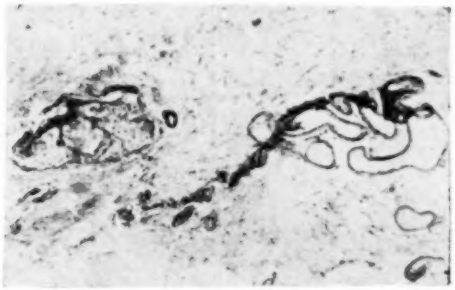


FIG 6 (Caae 1)—Skin from axilla showing an imperfectly formed sebaceous gland, presence of apocrine glands, and absence of eccrine glands (H & E × 100)

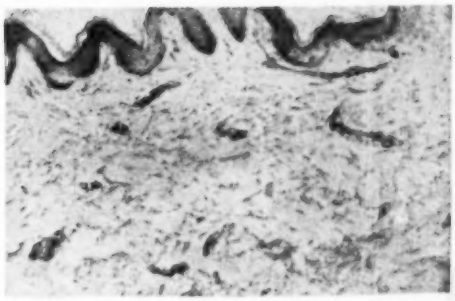


FIG 7 (Case 1)—Skin from antecubital fossa showing thin epithelium and a few rudimentary sweat glands (H. & E. × 100)

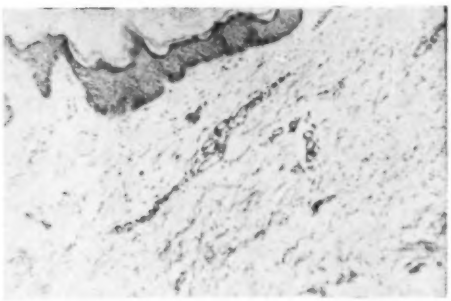


FIG 8 (Case 2)—Skin from left axilla showing absence of sweat glands (H & E. × 100)

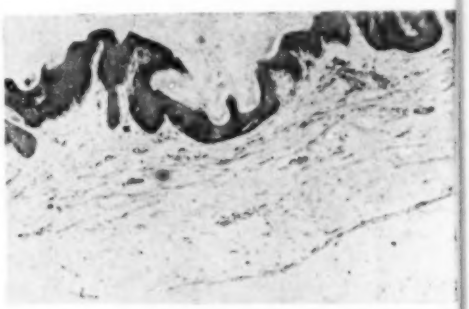


FIG. 9 (Case 2)—Skin from posterior part of neck Shows thin epithelial layer and absence of sweat and sebaceous glands. There is slight keratosis of the skin (H. & E. × 100)

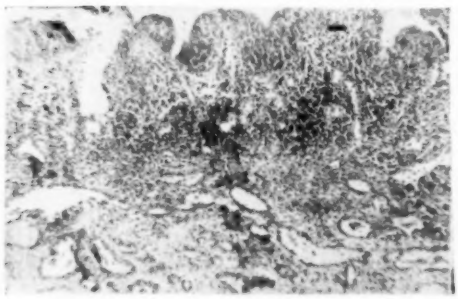


FIG. 10 (Case 2)—Nasal mucous membrane showing inflammatory cells and paucity of mucous glands (H. & E. × 100)

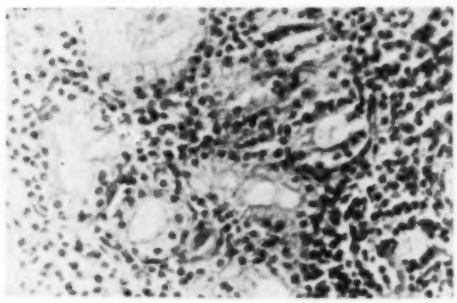


FIG 11 (Case 2)—Same as Fig 10 showing a few imperfectly formed mucous glands (H. & E × 450)

FIG. 12 (Case 2)—*Above.* Photograph showing the general appearance of the patient.

FIGS. 13 and 14 (Case 2)—*Above.* Two views of the head showing complete absence of hair on the sides. The scalp hair is long and sparse and extends along a 3 cm. wide area down the middle of the scalp from the upper frontal region backward to the external occipital protuberance.

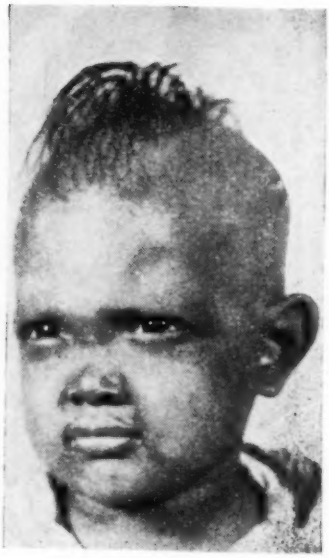


FIG. 15 (Case 2)—*Above.* Showing distribution of scalp hair, frontal bossing, oblique set of ears, absence of eyebrows, marked depression of the nasal bridge and the thick, everted lips.

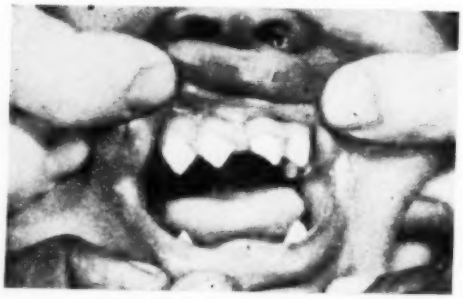


FIG. 16 (Case 2)—*Centre.* Showing the character and distribution of the malformed teeth in the front of the mouth.

FIG. 17 (Case 3)—*Bottom left.* Showing the thin scalp hair and sparseness of eyebrows and eyelashes. The ears stand out rather obliquely from the head.

FIG. 18 (Case 3)—*Bottom right.* Showing the missing lower incisors (tongue protruded in this space). Upper central incisors widely spaced and have doubly notched lower borders. Absence of upper lateral incisors not apparent in the picture.

(deciduous and permanent) never erupted. His scalp hair had always been thin, slowly growing and dark brownish in colour.

Mentally, he was entirely normal and was an honour student in school.

PHYSICAL EXAMINATION:—T. 100·4°. P/R=92/22 per min. B.P. 110/80. The patient was a rather small, but moderately well nourished 11 year old boy who was alert and co-operative.

The skin was everywhere fine textured and thin. There was no moistness felt anywhere though the day was hot and the child's temperature was 100·4°F (M). There was a scant growth of very soft, blonde hair on the dorsum of the forearms, the backs of the hands and the sides of the face and upper lip. The scalp hair was dark brown in colour, fine and moderately thin, but there was no alopecia. The eyebrows were sparse, fine and short. The eyelashes were scant. There was no axillary or pubic hair. The finger nails and mammæ were normal.

The head was of normal size. There was fairly marked frontal bossing. The ears stood out at an oblique angle from the head. The lips were rather thick and everted. (Fig. 17, *vide* Plate).

The lower incisors (central and lateral) were absent and the gingivæ in this area appeared atrophic. The upper lateral incisors were also missing. The upper central incisors were normal except that they were set rather widely apart and had a doubly notched lower border (Fig. 18, *vide* Plate). Both the upper and lower dental arches were well preserved. The teeth were otherwise normal.

The nasal and pharyngeal mucous membranes were thought by the E.N.T. consultant to be within normal limits. The tonsils were moderately enlarged and showed prominent crypts.

The chest was rather asthenic in type but symmetrical. Lungs were clear.

There were no other significant findings on physical examination.

LABORATORY EXAMINATION.—Routine examinations of the blood and urine gave normal results. The blood Kahn was negative. The erythrocyte sedimentation rate was within normal limits. The Mantoux test was negative (P.P.D. 5 test units injected intradermally). Chemical examination of the blood revealed 8·55 mgm. of calcium per hundred cubic centimetres of serum; 3·8 mgm. of inorganic phosphorus per hundred cubic centimetres of serum; 212 mgm. of cholesterol per hundred cubic centimetres of serum.

Roentgenological examination of the chest showed no evidence of pulmonary pathology and the cardiac silhouette was within normal limits.

## DISCUSSION OF THE IMPORTANT FEATURES OF ANHYDROTIC ECTODERMAL DYSPLASIA

Individuals affected by the anhydrotic type of ectodermal dysplasia resemble each other in a striking fashion because of their unusual facies characterised by high, wide brows, frontal bossing, depressed nasal bridge, rather thick everted lips and ears that stand out obliquely from the head. The typical anhydrotic facies is not conspicuous in the first few weeks of life but has been reported as early as one year of age.

Anhydrotic ectodermal dysplasia is usually a heredo-familial disorder but may occur sporadically. The mode of genetic transmission is apparently not identical in all subjects. There are now reports in the literature in which in different families the anhydrotic form of ectodermal dysplasia is inherited as a sex-linked, dominant and as a recessive characteristic. Males are affected much more often than females.

The distinctive characteristics of this condition are: (1) Marked diminution to complete absence of sweat glands and pilosebaceous apparatus. The work of several investigators, chiefly Tendlau (1902), Loewy and Wechselman (1911) established the fact that insensible perspiration is perfectly normal in persons devoid of sweat glands, and sufficient to sustain good health provided they keep in a cool place and do not perform undue physical work. When, however, the outside temperature is raised or muscular activity is increased elevation of the temperature occurs due to lack of this emergency control mechanism. In most of the reported cases the inability to sweat has made life miserable during hot weather. Hyperpyrexia and heat stroke are common occurrences. Victims of this clinical picture learn early that in a hot environment they can be comfortable only if they keep their clothes wet.

(2) Dental dysplasia. Teeth may be completely absent, partially missing, or malformed. The erupted teeth, especially in the incisor and bicuspid areas, are often widely separated, conical or peg-shaped, darkly pigmented and fragile.

(3) In almost all of the reported cases the skin is described as soft, thin, and dry. Hypochromia has been a conspicuous feature in some instances. The mammary glands may be normal or they may be poorly developed or absent.

(4) Maldevelopment of mucous membranes of the nose and throat. Biopsies reveal hypoplastic changes in the epithelium and glands. In some of the reported cases there has been almost a complete absence of mucous glands. Common complaints referable to the nose and throat are: chronic rhinitis, often with very offensive discharge, impairment of the sense of taste and smell, hoarseness and frequent dry, scratchy sensation in the throat. Dysphagia and intermittent, complete aphonia have been reported.

(5) Abnormality of the hair. In most of the cases the scalp hair is very thin, often there are large scalp areas that are hairless but there is no patchy alopecia. The hair is fine in texture, usually deficient in pigment and slow in growth. Eyebrows and eyelashes may be sparse or absent. Axillary and pubic hair is affected less frequently, but may be absent.

(6) The nails are usually normal in anhydrotic ectodermal dysplasia in contrast to the hydrotic variety in which in practically 100 per cent of the cases the nails are abnormal.

If the clinical picture is borne in mind the differential diagnosis usually offers little difficulty. It should be remembered, however, that cases have been misdiagnosed as syphilis and that certain features superficially suggest hypothyroidism and progeria. In hydrotic ectodermal dysplasia there is no diminution in the ability to sweat, the skin of the palms and soles is usually hyperkeratotic and there are abnormalities of the nails in most of the cases. In chronic hypoparathyroidism (Wilkins, 1950) changes in the skin, hair, teeth and nails identical with those seen in hydrotic ectodermal dysplasia may occur.

The etiology of congenital ectodermal dysplasia remains obscure. The great amount of work that has been done to try to establish some endocrine dysfunction as the basis has been negative.

Important points in the management of cases are as follows:—

1. The genetic transmission of the defect should be explained.
2. Anhydrotic patients should be taught how they can live best within the restrictions imposed by their anhydrosis.
3. Patients with hypodontia should have artificial dentures. These should be fitted early to insure normal development of the maxilla and mandible.
4. Plastic repair of saddle nose deformity and the use of a wig (especially by female patients with severe alopecia) will improve the patient's appearance and general morale.
5. Oestrogenic substances have been used effectively in the treatment of the chronic rhinitis (Mortimer, 1937 and Clouston, 1939).

SUMMARY

The above cases of ectodermal dysplasia are reported because they show all the characteristic features of what is considered to be a rare clinical syndrome. Although this syndrome does occur in India, as reported by Widderburn (1838), no further cases have been published from this country except for the preliminary report of Thadani (1921).

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## OBSERVATIONS ON THE NATURE OF CHOLERA STOOLS

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Cholera is a condition attended with a considerable loss of water and electrolytes from the body, the clinical manifestation of which appears as marked dehydration. In instituting the treatment for this condition, however, the nature of the fluid lost from the body is not given an accurate consideration. Systematic studies on the nature of cholera stool has not yet been done. Banerji (1941) estimated only the chloride content of the stool in cholera. In order to plan a rational treatment aimed at replacing the fluid lost from the body a knowledge of the composition of the stool is essential. It is with this object that an opportunity was availed of during the recent epidemics, in order to study the important physical and chemical characters of the stool in cholera.

### MATERIAL AND METHODS

Specimens of stool were obtained from cases of cholera admitted into this hospital under one of us by passing a rectal catheter before any treatment was instituted. A few c.c. of the stool collected in a sterile test tube containing borate buffer solution was sent for bacteriological examination. A further quantity of stool collected through the same catheter in a clean jar was sent for the study of physical and chemical characters. A separate sample of stool was collected

under liquid paraffin for determination of pH. Only bacteriologically positive specimens of stool are considered in this communication.

After naked eye examination, the specific gravity of the stool was taken by hydrometer. The sediment of the stool was determined by centrifugalisation at 2,400 R.P.M. for ½ hr., pH was determined colorimetrically using phenol red as an indicator, in a Loviband comparator. For this purpose the stool was collected and examined under liquid paraffin.

The $HCO_3$ content of the stool was estimated by van Slyke's volumetric apparatus and the result expressed in volumes of $CO_2$ per 100 c.c. of stool.

The nitrogen content was estimated by micro-Kjeldahl method.

For the estimation of minerals a part of the stool filtrate was made into ash by Stolte's process and the estimations were done colorimetrically with a photo-electric colorimeter by standard methods described by King. Chlorides were estimated by the method of van Slyke.

Evan's blue in the stool was estimated after precipitation by HCl and phosphotungstic acid after the method advocated by Crooke and Morris (1942).

The thiocyanate in the stool was estimated by adding ferric nitrate to the trichloracetic acid filtrate of the stool and comparing the colour in photo-electric colorimeter with that obtained from a known standard.

Alkaline phosphatase in the stool was estimated by the method of Bodansky. The other enzymes were estimated by adding 1 c.c. of cholera stool to 1 c.c. of substrate solution and incubating for 1 to 2 hours, control tubes containing the substrate and boiled cholera stool and also the substrate and emulsion of cholera vibrios were set up side by side for comparison.

## Results

*Physical characters and general appearance*—Consistency of most specimens of stool was that of thin gruel or barley water. The colour was whitish opalescent; some samples were frankly turbid, due to suspended granular matter and opaque shreds. On filtration through a filter paper the filtrate was almost clear. Pinkish stool containing blood occasionally occur in cholera. We did not encounter any blood in the twenty-five vibriopositive specimens of stool that were investigated. One specimen (No. 22) was bile-stained. The quantity of mucus was very variable some containing little or more; two specimens, however, were of the consistency of thin jelly.

*Microscopic examination*—Twenty fresh unstained specimens of stool were examined microscopically for cellular exudates. Pus cells were very scanty in nine, a few were found in five, and a fair number in six specimens. Evidence of associated infection was present in four of the latter. Roundworm ova were detected in one, and cysts of *Ent. histolytica* in three others. A small number of R.B.C.'s were present in a few samples and macrophages in two.

*Specific gravity*—The specific gravity of the stool was estimated in ten cases. The lowest specific gravity was 1008 and the highest 1012, the average being 1010.

*Sediment*—The sediment after centrifugalisation was measured in 12 cases. The minimum value of the sediment was 1 per cent, the maximum value was 22 per cent and the average was 9·8 per cent.

*Reaction*—The pH of the stool was determined in 20 cases. It varied between 7·3 and 8·4, the average being 7·86. The value was above the average in 12 cases and below the average in 8.

*Total protein*—This was estimated in the supernatant fluid after centrifugation of the stool in 16 cases. The lowest value was 0·1 gm. and the highest was 0·5 gm. per 100 c.c., average being 0·26 gm. per cent. The distribution was uniform. The protein content of the unfiltered stools was estimated in 5 cases, the average value was 0·9 gms. per 100 c.c.

*Sodium*—Sodium content of the stool was estimated in 10 cases. The lowest value was 260 mgm. and the highest 322 mgm. per cent, the average being 286·2 mgm. per 100 c.c. Four figures were above and 6 below the average.

*Potassium*—The potassium content of the stool was estimated in 10 cases. The lowest value was 56 mgm. per 100 c.c. and the highest was 89 mgm. per 100 c.c., the average value being 74·6 mgm. per 100 c.c.

*Chlorine (-ion.)*—The chloride content was estimated in 20 samples of stool. The lowest figure was 200 mgm. per cent and the highest was 325 mgm. per cent, the average being 268 mgm. per cent. In 9 patients the stool chloride value was above and in 11 below the average.

*Inorganic phosphate* was estimated in 7 cases and varied between 2·4 mgm. to 6·5 mgm. per 100 c.c. The average value for $-PO_4$ was 3·6 mgm. per cent.

*Bicarbonate*—The bicarbonate content of the stool was estimated in 12 cases. Expressed in terms of volume of $CO_2$ in 100 c.c., the figure varied between 45 c.c. of $CO_2$ per 100 c.c. to 88 c.c., average being 68·2 c.c. of $CO_2$ per cent. In 5 patients the $-HCO_3$ value of the stool was above and in 7 below the average.

*Enzymes*—Eight samples of stool were estimated for their enzyme content. The results were as follows:—

| | | |
|---|---|---|
| 1. | Tryptic activity ... | could not be detected. |
| 2. | Peptidase activity ... | very slight. |
| 3. | Amylase content ... | marked. |
| 4. | Invertase ... | marked. |
| 5. | Maltase ... ... | present in moderate amounts. |
| | Lactase ... ... | could be detected in one sample only. |
| 6. | Phosphatase activity | marked. |

Amylase and phosphatase were estimated quantitatively. The amylase content in most samples were near about 300 units, the phosphatase content varied between 6 to 14 Bodansky units per 100 c.c.

*Dye*—Six specimens of stool were examined 1 to 2 hours after an intravenous injection of 5 c.c. of 0·7 per cent T-1824. In none of the six samples examined could the presence of the dye be detected.

*Thiocyanate*—Sodium thiocyanate 500 mgm. was injected to the patients receiving the dye. One to two hours after injection the thiocyanate content of the blood and stool was estimated. Thiocyanate could be detected in every sample of stool examined though the concentration of thiocyanate in the stool was somewhat less than that in the blood.

| *Serial No.* | *Date* | *Initials* | *Naked eye character* | *Sediment* | *Sp. gr.* | *pH* | *Total Protein (gm. %)* | *Sodium (mgm. %)* | *Potassium (mgm. %)* | *Cl ion (mgm. %)* | *Inorg. $PO_4$ (mgm. %)* | *$-HCO_3$ ($CO_2$ c.c. %)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | 17-3-51 | L | R.W. | ... | ... | ... | *1·2 | 285 | ... | ... | ... | ... |
| 2. | 88-3-51 | S | R.W. | ... | ... | ... | ... | 292 | ... | ... | ... | ... |
| 3. | 25-3-51 | L | R.W. | ... | ... | ... | *1·0 | 275 | 70 | 316 | ... | ... |
| 4. | 9-4-51 | C | R.W. | ... | ... | ... | 0·3 | ... | ... | 250 | ... | ... |
| 5. | 18-3-52 | K | R.W. | ... | ... | ... | 0·21 | ... | ... | 225 | ... | ... |
| 6. | 13-3-52 | M | R.W. | ... | ... | 7·9 | ... | ... | ... | 300 | ... | ... |
| 7. | 20-3-52 | AR | R.W. | ... | ... | 7·9 | 0·23 | ... | ... | ... | ... | ... |
| 8. | 21-3-52 | L | R.W. | ... | ... | 7·8 | 0·26 | ... | ... | 250 | ... | 70·6 |
| 9. | 25-3-52 | K | R.W. | ... | ... | 8 | 0·25 | ... | 88 | 250 | ... | 68 |
| 10. | 26-3-52 | A | R.W. | ... | ... | 8·2 | 0·15 | ... | ... | 225 | ... | 45 |
| 11. | 28-3-52 | B | R.W. | ... | ... | 7·3 | 0·1 | 322 | 72 | 210 | ... | ... |
| 12. | 28-3-52 | BK | R.W. | 22% | 1012 | 7·9 | 0·17 | ... | 56 | 300 | ... | ... |
| 13. | 29-3-52 | N | R.W. | ... | 1008 | 8 | *0·6 | ... | ... | 268 | ... | ... |
| 14. | 31-3-52 | M | R.W. | 5% | ... | 7·5 | *0·5 | ... | ... | 300 | ... | 47 |
| 15. | 31-3-52 | A | R.W. | 15% | 1010 | 7·9 | 0·33 | ... | ... | 325 | ... | ... |
| 16. | 1-4-52 | K | R.W. | 2% | ... | 8·4 | 0·27 | ... | ... | 300 | ... | ... |
| 17. | 3-4-52 | M | R.W. | 5% | 1010 | 7·75 | 0·19 | 290 | ... | 250 | 2·4 | 87·3 |
| 18. | 4-4-52 | C | R.W. | 10% | 1008 | 7·9 | 0·31 | 305 | ... | ... | 2·6 | 86 |
| 19. | 5-4-52 | M | R.W. | 16% | 1012 | 7·8 | ... | ... | 88 | 320 | 2·4 | 88 |
| 20. | 7-4-52 | D | R.W. | 13% | ... | 7·6 | 0·17 | ... | 89 | 270 | ... | 60 |
| 21. | 10-4-52 | P | R.W. | 20% | 1010 | 8·2 | 0·27 | 260 | ... | 250 | 2·9 | ... |
| 22. | 12-4-52 | S | **R.W. | 6% | 1010 | 8 | ... | 280 | 77·2 | 200 | ... | 60 |
| 23. | 14-4-52 | R | R.W. | 1% | 1010 | 7·8 | 0·4 | 285 | 72 | ... | 4·4 | 60 |
| 24. | 15-4-52 | K | R.W. | 2% | 1010 | 8 | 0·5 | 268 | 76 | 250 | 6·5 | 70 |
| 25. | 16-4-52 | B | R.W. | ... | ... | 7·9 | *1·20 | ... | 56 | 300 | 4 | 64 |

* Indicates unfiltered stool.

** Bile stained.

## Discussion

A study of the results presented above would indicate that apart from the sediment present in the stool the fluid which is ejected has physical and chemical properties resembling that of plasma, minus its protein. The hydrogen ion concentration of the stool is to some extent less than that of the blood. This is expected from the fact that the stool contains slightly higher concentration of bicarbonates. The reduced concentration of proteins in the stool is obviously due to the fæcal fluid being of the nature of a transudate from the plasma. The relative concentrations of the electrolytes in the stool and plasma are similar to those between the plasma and the tissue fluid. The fact that free passage of diffusible substances takes place between the plasma and the intestinal contents is shown by the ease with which intravenously injected sodium thiocyanate is detected in the stool. This hypothesis finds support from the fact that the cholera stool is particularly poor in protein. It will be seen that the average protein content of the filtered stool in cholera is only 0·26 gms. per 100 ml. This is similar to the protein content of the interstitial fluid observed by Green *et al* (1931), Peters (1936) and Mukherjee and Govan (1950). Indeed the protein content was slightly higher in the whole stool but even here it never approached a concentration near that found in inflammatory exudates or in those conditions where the capillary permeability is grossly interfered with. This was further shown in this

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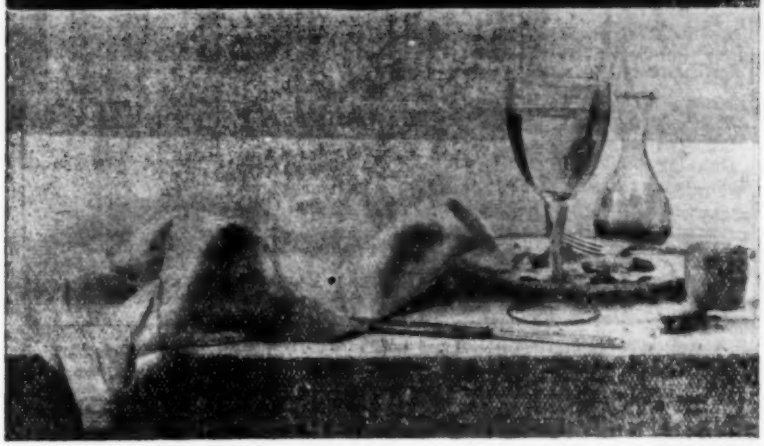

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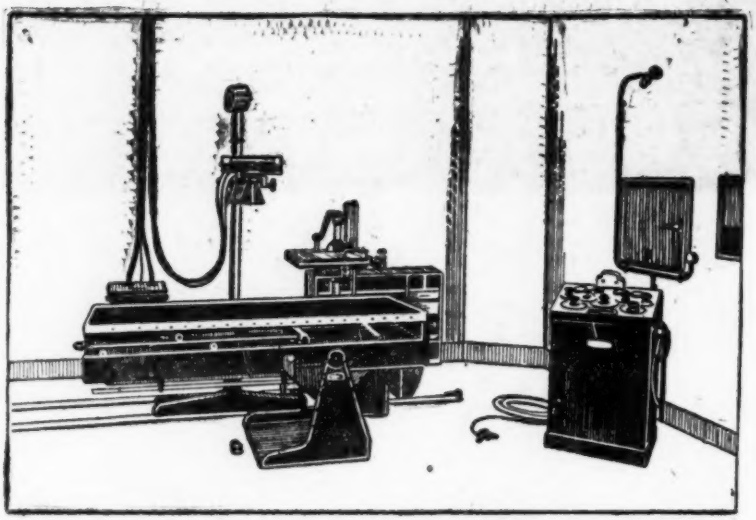

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investigation by the absence of Evans blue in the stool after intravenous injection of the dye. It is noted with interest that the dye and the thiocyanate were injected simultaneously. While the thiocyanate appeared in the stool in reasonable concentrations within an hour of intravenous injection, Evans blue was conspicuous by its absence. Thiocyanate is freely diffusible. Its presence in the stool is expected. Evans blue is a colloidal dye and remains principally adsorbed to the protein molecules and can be expected to be present when plasma proteins find their way into the medium. In albuminuric subjects Evans blue could be recovered from the urine. This obviously points to the conclusion that the stool in cholera is plasma fluid minus its proteins, which undergoes some modification during its passage through the intestinal mucous membrane and glands. This explains the presence of the enzymes in the stools and the high concentration of potassium.

The authors are of opinion that the cholera stool is of the nature of a transudate from the plasma, the intestinal mucous membrane serving as a semipermeable membrane. The slight alkali excess in the stool may be responsible for the alkali deficit in the plasma, as demonstrated by the authors in a previous communication (Saha and Das, 1951). The significance of increased potassium content is not yet fully understood. Further work is proceeding in this direction.


## Summary

1. Physical and chemical characters of specimens of stool from cases of cholera have been investigated.

2. Injected Evans blue could not be detected in the stool while simultaneously injected sodium thiocyanate appeared in appreciable quantities.

3. Observations are made on the permeability of the intestinal mucous membrane in cholera, from these findings.

4. It is concluded that the fluid portion of the cholera stool is of the nature of a transudate.



## Acknowledgment

We are grateful to Principal A. K. Duttagupta, for all facilities for this investigation, to Prof. S. Ghosal and Dr. S. Gupta for undertaking the stool cultures. We are also thankfull to Sri Arun Dattagupta, technician, for valuable assistance.


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# PLEURAL EFFUSION IN ARTIFICIAL PNEUMOTHORAX WITH SPECIAL REFERENCE TO SEASONAL VARIATION


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AND

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Serous effusion of the intrapleural space has been the subject of study by many workers all over the world and practically all of them have concluded that it is the commonest complication of artificial pneumothorax treatment. The data presented here have been collected with a view to find the incidence of this complication in cases treated at K. E. Sanatorium, Bhowali. Our main aim underlying this study was to find out as to which part of the year it is more likely to occur. Before giving our figures we will say a few words about the etiology of this complication.

## Etiological Factors

Matson (1947) writes, about the etiology of this complication in artificial pneumothorax, "Mere presence of air in the pleural cavity acts as a foreign body and the unphysiological intrapleural pressure conditions are sufficient to produce this exudate."

1. Separation of pleural layers by gas with consequent stretching and perhaps rupture of the adhesions at the site of their attachment with the visceral and parietal pleuræ is one of the commonest factors that gives rise to effusion. The adherent pleura usually provides the surface tubercles with a protective barrier and as a result of separation of the layers these tubercles burst into and infect the pleural cavity. Hutchinson suggested that effusion in tuberculous cases treated with A. P. was often due to a simple rupture of the lung that is to say a spontaneous pneumothorax.

2. Incidence of effusion is usually influenced by the type and extent of disease. Advanced and active disease is more likely to give rise to effusion when treated with A.P. than when it is chronic. Peripherally situated and exudative lesions are more likely to produce this complication than productive and internally situated lesions.

3. It has been suggested that irritation caused by repeated punctures of the pleura leads to localised dry pleurisy and consequently effusion develops. But thoracoscopic examination reveals no such pleurisy at the site of these punctures.

Cold is said to predispose to effusion. Dumarest and Brette state that it is an uncontestable fact that in sanatoriums one sees a regular epidemic of pleurisy during specially cold and damp weather. Von Muralt

and Andreoni agree with this view whereas Saugman and Burrell believe that there is no such increase. As mentioned by Burrell (1932), it is possible that cold and damp weather increases the activity of the underlying lesions and consequently the chances of any complication, the most common of which is pleural effusion.

Factors like exercise, temperature, nature and amount of gas introduced, positive pressures after refills and anæsthesia have been attributed to predispose to this complication but it has been found that they do not play any important part.

Our study has been made from 168 patients treated with A.P. at K. E. VII Sanatorium, during the year 1950. Out of these, 9 cases have not been considered as in them only 2-3 refills were given and then A.P. was given up. So there remain 159 cases and out of these, 72 cases developed this complication during the period of observation giving a percentage of 45·2. If the 8 cases, in whom effusion was present during the preceding year and persisted in the year of observation are deducted, the percentage of incidence comes to 42·6 (Table 1.).

TABLE 1—SHOWING THE PERCENTAGE AND NUMBER OF CASES WHO DEVELOPED THE COMPLICATION IN OUR SERIES

| | *No. of cases having A.P.* | *No. and percentage of cases in whom effusion occurred* |
|---|---|---|
| Total No. of cases having A.P. during the year ... | 159 | 72 (45·2%) |
| No. of cases in whom A.P. was started before the period of observation and continued afterwards ... | 53 | 27 (50·9%) |
| No. of cases in whom A.P. was started during the period of observation ... | 98 | 37 (37·8%) |
| Total number of cases getting A.P. and in whom effusion occurred for the first time during observation period | 151 | 64 (42·6%) |

Figures quoted by other workers are given below. Our figures come very near to those of Burrell and Riviere but show a marked difference with those of Ray *et al* (1943) only whose figures we could find from among the workers in this country.

| | | |
|---|---|---|
| Burrell (1932) | ... ... | 41·4% |
| Riviere (1927) | ... ... | 50 % |
| Saugman (1914) | ... ... | 67.2% |
| Dumarest and Brett (1929) | ... | 70·3% |
| Ray *et al.* | ... ... | 60·4% |
| Matson | ... ... | 17·3% but believes that all cases develop it some time or the other. |

Davies (1933) states that some authorities even believe that if A.P. is continued long enough, an effusion often transient and possibly of so small an amount that it cannot be detected clinically, though visible by radiology, will occur in 100 per cent of cases. With the lengthening of time of maintaining A.P. there is a steady increase in the probability of an effusion developing. He gives a figure of 30 per cent in the first three months of starting A.P. treatment and 50 per cent when it is continued for five months.

The cause of this divergence seems to be in the method of observation. Routine radiology raises the percentage of cases as compared to a purely clinical diagnosis. In our cases we have used radiology as often as possible and percentage has been calculated from cases who showed fluid on screening and x-ray examination. No doubt our period of observation has been fairly short but it has been partly compensated by our including cases who were getting A.P. from the preceding year.

### SEASON OF OCCURRENCE

A study of Table 2 and Figs. 1, 2, 3 and 4 will give some idea about the season of occurrence of this complication. It is worth noting that there is a sudden rise in the number of cases in whom fluid was first detected in the month of July and it has persisted till November. Similarly, the total number of cases in whom fluid was present during the particular month has also showed a rise during the same period. This is the period of heavy rains in this part of the country and the humidity also increases during these months. (See column 4, Table 2). Column 3 in the same table indicates the number of cases in which effusion although present during the preceding month was absent under the screen in that particular month. This analysis was made with a view to find as to which part of the year is favourable for absorption of fluid. No doubt our

TABLE 2—EFFECT OF CLIMATE ON THE INCIDENCE OF PLEURAL EFFUSION. TABLE SHOWING THE NUMBER OF CASES MONTHWISE

| | *No. of sides effusion detected for the first time since A.P. was started* | *Total No. of sides effusion was present during the month* | *No. of sides in which effusion seen in the previous month but not in this particular month and after it* | *Humidity per cent average* |
|---|---|---|---|---|
| January ... | 3 | 9 | 1 | 65.22 |
| February ... | 5 | 15 | 1 | 56·00 |
| March ... | 4 | 18 | 3 | 64·00 |
| April ... | 5 | 21 | 4 | 39·83 |
| May ... | 3 | 18 | 3 | 51·38 |
| June ... | 4 | 22 | 3 | 80·53 |
| July ... | 9 | 27 | 3 | 97·77 |
| August ... | 14 | 36 | 3 | 99·09 |
| September ... | 9 | 37 | 7 | 86·70 |
| October ... | 9 | 38 | 8 | 54·74 |
| November ... | 8 | 36 | 9 | 46.26 |
| December ... | 2 | 27 | 3 | 52·16 |

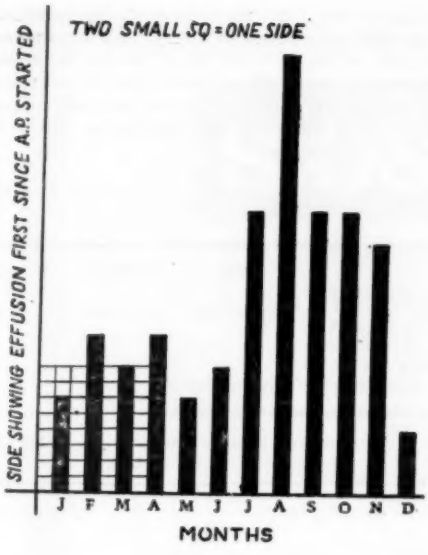


FIG. 1

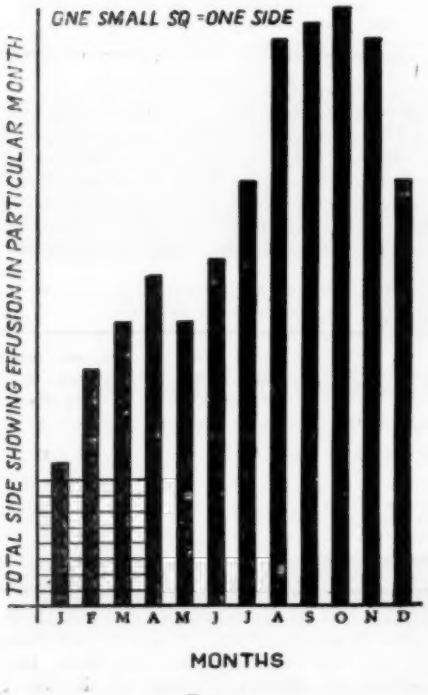


FIG. 2

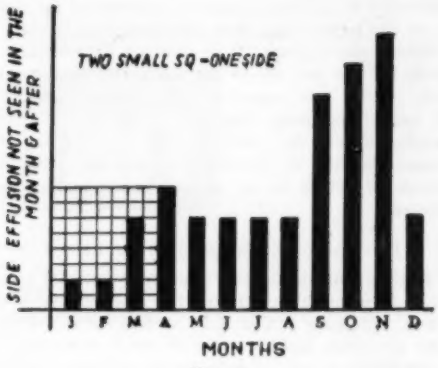


FIG. 3

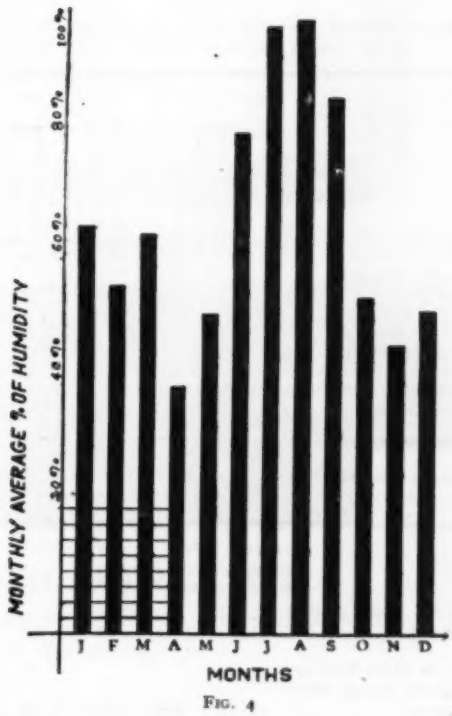


FIG. 4

results are not conclusive but we find that the largest number of cases in which fluid was not detected occur in the months September, October and November. These are the months when rains are subsiding and it is the driest season of the year.

Cold and damp climate may not have anything to do with the etiology of effusion in artificial pneumothorax, directly; but as Burrell believes, it may affect

it indirectly by activating lesions or lowering the resistance of the patient and thus increasing the chances of an effusion developing. It is common experience that patients do not feel up to the mark during the rainy season. They lose appetite, get frequent attacks of cold, and suffer from digestive disturbances. These naturally lower the resistance of the patient and increases liability to develop complications, the most common of which is an effusion complicating A.P. treatment.

### Influence of Sex and Side of Lesion

Further analysis of our cases revealed that pleural effusion as a complication occurred more in males, and in cases who were getting A.P. on the left side (Tables 3 and 4). This finding is not of much significance as the difference in case of sides seems accidental whereas the question of sex can be explained on the basis that there were more male patients under the treatment.

Table 3—Showing Incidence of Effusion in its Relation with Sex Distribution

| | Males | | Females | |
|---|---|---|---|---|
| | *Total cases with effusion* | *Those occurring during period of observation* | *Total cases with effusion* | *Those occurring during period of observation* |
| No. of cases getting A. P. ... | 120 | 114 | 30 | 37 |
| No. of cases developing effusion | 57 | 51 | 15 | 13 |
| Percentage of effusion in each sex | 47·5% | 44·7% | 38·4% | 35·1% |

Table 4—Showing Incidence of Effusion in its Relation to the Side on which A.P. was Being Given

| | *Right side A.P.* | *Left side A.P.* | *Bilateral A.P.* | *Total sides* |
|---|---|---|---|---|
| No. of cases getting A.P. ... ... | 63 | 65 | 31 | 190 |
| No. in whom fluid appeared during observation ... | 30 | 30 | 5 | 70 |
| | 47·6% | 46·2% | 16·1% | 38·6% |
| Total fluid cases ... | 32 | 36 | 5 | 78 |
| | 50·8% | 55·4% | 16·1% | 41·1% |

As to the amount and nature of the effusion our analysis indicates that most of our cases developed either a small or moderate amount of effusion. Only on five sides was the effusion of a marked degree giving a percentage of only 6·4. As to the nature of the effusion most of them were serous in nature. Those mentioned as probably serous were also serous because the amount of effusion was so small as could not be aspirated. It just showed an obliteration of the costodiagphragmatic angle under the screen and that too for only a few days (Tables 5 and 6).

Table 5—Showing the Amount of Fluid as it Appeared in Our Series

| | *Small* | *Moderate* | *Marked* |
|---|---|---|---|
| Total no. of fluid sides ... ... | 37 (47·4%) | 36 (46·2%) | 5 (6·4%) |
| No. of fluid sides during the period of observation ... | 37 (52·9%) | 30 (42·8%) | 3 (4·3%) |

Table 6—Showing the Incidence of Effusion in Relation to its Nature in Our Series

| *Nature of fluid* | *Serous* | *Purulent* | *Hemorrhagic* | *Serous becoming purulent* | *Hemorrhagic becoming purulent* | *Probably serous* |
|---|---|---|---|---|---|---|
| No. of sides ... | 25 | 4 | 1 | 7 | 1 | 40 |

### Age of Incidence

In order to find out as to which particular age group is most likely to develop this complication, we have analysed our cases and we find that the largest number of cases occurred in the age group of 20 to 30 years. This is also the age group in which the largest number of cases were getting artificial pneumothorax treatment (Table 7). But when we compared the percentage of cases, we were inclined to feel that if A.P. is given in advanced age, effusion is more likely to occur. A lock at the table will show that the percentage of effusion increases as the age group advances. It may be that in old age the resistance of

Table 7—Showing Age Groups in Relation to the Incidence of Effusion

| *Age groups in years* | *No. of cases getting A.P. treatment* | *No. and percentage of cases developing effusion* |
|---|---|---|
| Under 10 ... | 0 | 0 ( 0 %) |
| 11—20 ... | 32 | 12 ( 37·5%) |
| 21—30 ... | 89 | 39 ( 43·8%) |
| 31—40 ... | 29 | 16 ( 55·2%) |
| 41—50 ... | 8 | 4 ( 50 %) |
| Over 50 ... | 1 | 1 (100 %) |

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the patient is not so good as compared to the younger age groups. Hence the increased chances of developing any complication, effusion being the commonest.

### Influence of Duration of A. P. Treatment

In order to find out as to when after starting A.P. this complication is more likely to occur, we have analysed our cases under two headings. Firstly, the number of refills after which the largest number of cases occurred and secondly, the duration in months, after the initial A.P. was given. Under both these groups we find that most of our cases developed effusion in the earlier part of the treatment. In our series 50 per cent of the cases developed the complication by the time only 10 refills were given and 80 per cent by the time of 20 refills. Ray *et al* (1943) have also given an average figure of 11·5 refills in their series of cases. This shows that in a case getting A.P. treatment, chances of his developing this complication are more in the earlier part and they are much reduced as the treatment proceeds. We would like to make it clear that the number of A.P. cases developing effusion may increase with the lengthening of time of maintaining A.P. but the chances are reduced as the time of maintaining A.P. increases (Tables 8 and 9).

Table 8—Showing the Relation Between the Number of Refills and the Incidence of Effusion

| *No. of refills* | 0-10 *refills* | 11-20 *refills* | 21-30 *refills* | *over* 30 *refills* |
|---|---|---|---|---|
| No. of sides developing effusion ... | 29 | 18 | 6 | 6 |

Table 9—Showing the Relation Between the Duration in Months and the Incidence of Effusion

| *Period in months* | *Under* 3 *months* | 3—6 *months* | 6—9 *months* | 9—12 *months* | *Over* 12 *months* |
|---|---|---|---|---|---|
| No. of sides developing effusion ... | 34 | 20 | 11 | 5 | 6 |

### Influence of Type of Lesion

Other workers have reported that exudative disease is more likely to give rise to effusion if A.P. is given to such cases. Our findings are similar as will be evident from Table 10. Out of the 50 cases with exudative lesions who were given A.P. in our series, 35 developed effusion whereas out of the 32 cases with productive lesions only 6 showed this complication.

In the present streptomycin era we are inclined to feel that this incidence is likely to come down if streptomycin is used in all exudative cases before starting A.P. treatment.

Table 10—Type of Lesion and its Influence on the Incidence of This Complication

| *Type of lesion* | *Exudative* | *Mixed* | *Productive* |
|---|---|---|---|
| No. of cases who were getting A.P. | 50 | 43 | 32 |
| No. of cases who developed effusion | 35 (70%) | 18 (41·8%) | 6 (18·7%) |

### Influence of Type of Collapse and Adhesions

The type of collapse and the presence of adhesions also influence this complication. Table 11 will show that patients who had a selective collapse of the lung after A.P. are less likely to have this complication, but with a contraselective collapse the chances seem equal as our figures suggest. This appears to us as doubtful because in cases with a contraselective collapse the chances ought to be more but our figures do not suggest it.

Table 11—Showing Type of Collapse and its Influence on the Incidence of Effusion

| *Type of collapse* | *Total No. of sides with such a collapse* | *No. of sides effusion developed and percentage* |
|---|---|---|
| Selective ... ... | 102 | 48 (47·1%) |
| Contraselective ... | 36 | 18 (50 %) |

As far as adhesions are concerned we find that patients who had no adhesions are less likely to develop effusions. Table 12 clearly demonstrates it, in our series out of 24 such cases only 4 of them developed effusion giving a percentage of only 16·6; whereas out of the 102 cases where adhesions were present 61 of them developed the complication. The influence of adhesions will be further demonstrated by our observations in cases who underwent a thoracoscopy and internal pneumonolysis.

Table 12—Showing Presence of Adhesions and Their Influence on the Incidence of Effusion

| | *Total No. of sides* | *No. and per cent of sides that developed effusion* |
|---|---|---|
| Adhesions present ... | 102 | 61 (59·8%) |
| Adhesions absent ... | 24 | 4 (16·6%) |

### Effect of Operative Procedures

Effect of thoracoscopy and internal pneumonolysis on the incidence of this complication is worth noting. Out of the 73 sides on which this operation was performed, 45 sides showed effusion after the operation giving a percentage of 61·6. Whereas of six sides which already had effusion before the operation, the amount of fluid increased in amount in three as shown under the screen. On six sides where only thoracoscopy was done, the percentage of this complication is only 16·6. Our explanation for this difference

is that in cases where adhesions are divided the chances of breaking the surface tubercles are more than when no adhesions are divided. Moreover, the chances of irritating the pleura are also more when adhesions are severed. The effect of the operation becomes more evident by comparing the figures in cases where this operation was not at all performed; out of 111 such cases only 32 (28·8 per cent) developed effusion (Table 13.).

TABLE 13—SHOWING THE INFLUENCE OF THORACOSCOPY AND INTERNAL PNEUMONOLYSIS ON THE INCIDENCE OF EFFUSION

| | *Thoracoscopy only* | *Thoracoscopy and internal pneumonolysis* |
|---|---|---|
| Total no. of sides operation done ... ... | 6 | 73 |
| No. of sides effusion developed ... ... | 1 (16·6%) | 45 (61·6%) |
| No. of cases effusion did not appear ... | 3 | 22 |
| No. of cases effusion present before operation was done ... ... | 2 | 6 |
| No. of cases in whom amount of fluid increased after operation ... | 1 (50 %) | 4 (66·6%) |

## SUMMARY AND CONCLUSIONS


1. Effusion in artificial pneumothorax is essentially a tuberculous exudate. Cold and damp climate affects its incidence indirectly.

2. In our series 45·2 per cent showed this complication.

3. Incidence increases during the rainy months and gradually subsides as dry months approach.

4. It seems more common on the left side and in males.

5. Most of the cases are serous in nature and develop a small or moderate amount of effusion.

6. Age does not influence its incidence much but the chances increase as age advances.

7. Most of the cases develop effusion in the early part of the treatment.

8. Exudative lesions are more likely to give rise to this complication.

9. Cases without adhesions are less likely to get it. Chances in selective collapse are less.

10. Internal pneumonolysis raises the incidence of this complication markedly.



*Acknowledgments*—Our thanks are due to other medical officers for their co-operation and to Shri Sunderlal for technical assistance.


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*PRACTITIONERS' CORNER*

# OEDEMA IN OBSTETRIC PRACTICE*


NAGEN GHOSH, M.B., D.G.O., D.R.C.O.G. (LOND.),

*Calcutta*


About 70 per cent of total body weight consists of water, of which 80 per cent is intracellular and 20 per cent extracellular. Of the latter, 5 per cent is intravascular and 15 per cent interstitial. The body water is derived from the water taken with food and drink, and also as an oxidation product during the metabolism of the ingested food.

Normally, a balance is maintained between the water intake and loss of body fluid. The average daily output amounts to approximately 2,500 ml. of which. urine comprises 1,500 ml., evaporation through skin 500 ml., lungs 400 ml. and with fæces 100 ml.

This balance is maintained by the semipermeable cell membranes, intravascular fluid pressure at both the arterial and venous ends of capillaries, intravascular osmotic tension, endothelial lining of the capillary wall, extravascular, *i.e.*, interstitial, osmotic pressure and by the excreting glomerular and reabsorbing tubular segments of a nephron.

In a normal nonpregnant woman, the protein content of the blood plasma is 7·2 gm. per cent comprising of serum globulin 2·7 gm., serum albumin 4·2 gm. and fibrinogen 0·27 gm. per cent. Normally, none of these proteins diffuse through the capillary wall and the protein content of the tissue fluid mounts to only about 0·01 gm. per cent. The intravascular osmotic tension is maintained mainly by the protein content of the plasma while the osmotic tension of the tissue fluids is maintained mostly by its sodium level.

The œdema in pregnancy may be, physiological, or pathological:

(1) *Physiological œdema* of pregnancy may again be divided into (*a*) a generalised puffiness of all the subcutaneous tissues of the body including those of face and hands and (*b*) a localised condition which is shown by only œdema of lower limbs.

Generalised physiological œdema: The plasma protein in pregnancy is lowered by about 10 per cent. This causes a reduction in osmotic pressure. If the total protein value falls below the critical level of 5·2 gms. per cent or if the albumin fraction falls below 2·3 gm. per cent œdema may develop.

In pregnancy, there is a retention of sodium by the action of sex and adrenal cortical hormones. Nearly 0·5 gm. of sodium is retained daily but all the sodium is not osmotically active, otherwise, the pregnant woman would drown herself in her own fluid and the amount of weight gain would have been

* Read at the Scientific Conference, R. G. Kar Medical College Reunion, 1951.

enormous. The average gain in weight of a normal pregnant woman is about 24 pounds and of this 50 per cent is due to the weight of the fœtus, liquor amnii and placenta. The net gain is, therefore, about 12 pounds only.

Localised physiological œdema: Much water is retained in the lower limbs. There may be two factors to account for it: (*i*) that it is a part of the general effect of steroid hormones with the resulting sodium retention and (*ii*) that an elevation of intravascular pressure from a normal of 11·43 cm. of water to 24·37 cm. takes place in the femoral veins (Killar and Southerland, 1941). There occurs a slowing in the rate of venous blood flow from foot to groin (Kellar, 1950). Probably the pressure of the uterus and its contents on the pelvic veins is the cause of this increased venous pressure and occurrence of œdema of the legs. The condition is much aggravated by standing long on the feet, specially without muscular action.

(2) *Pathological œdema* in pregnancy may also be generalised and localised.

The generalised pathological œdema may occur either due to an abnormality of the pregnancy itself, such as pre-eclampsia or due to some associated conditions, like chronic hypertension, chronic nephritis, extreme anæmia and congestive cardiac failure.

Several factors might account for the underlying pathology of this œdema, *viz.*, a diminished intravascular osmotic tension due to hypoproteinæmia, injury to the endothelial lining of capillaries due to a circulating toxin, anoxia of extreme anæmia or ischæmia caused by vascular spasm, as in chronic hypertension. On the other hand, again, it may develop due to an increase of interstitial osmotic pressure from retention of sodium which may further be aggravated by abnormal steroid metabolism during pregnancy, and excess of intake of salt.

The œdema of pre-eclamptic toxæmia may be very rapid in onset and is sometimes the earliest sign known. It may either be occult or manifest. The former can only be diagnosed by noting an abnormal and sharp rise in body weight, and the latter by a clinical condition of swelling of the upper and lower extremities, face and vulva. Albuminuria is seldom, if ever, an early sign of pre-eclampsia. Hypertension often precedes the œdema and it is not uncommon to find a patient with a systolic blood pressure at a critical level of 160 mm. Hg. or over, without any œdema, either occult or manifest. Although usual, it is not always essential for œdema to appear before an eclamptic convulsion occurs. It is, therefore, probable that hypertension and œdema are complementary and it is obvious that the control of hypertension by rest and sedatives, and of œdema by restriction of sodium, are all that will be required in the treatment of pre-eclamptic toxæmia. About restriction of fluid, there is a difference of opinion. In my opinion, if on measuring the daily intake and output, it is found that the kidneys are functioning fairly well, it is justifiable to push more fluid to wash out the retained salt; on the other hand, if the output is found to be proportionately less than the intake, it will be unwise to administer excess of water. Diaphoretics and saline purgatives can be administered but these are not always necessary.

The average daily intake of sodium is about 11 grammes but in a salt-restricted diet, not more than 4 gm. of salt are allowed. This implies that the diet should be from salt added during cooking or at the table. Salt-free diet is unpalatable and is ofter rejected by the patient. During recent years, an ion-exchange resin, such as Carboresin (Lilly) has been used to solve the problem. An exchange of ion takes place between the water-soaked resin molecule and other ionizable substances in solution such as sodium chloride in the intestines. A large portion of the ingested sodium chloride remains unabsorbed and is excreted with fæces. Average dose per day is 48 grammes.

If the blood protein is found to be below the critical level of 5·2 gm. per cent, protein of high biological value should be prescribed either orally or parenterally.

Regarding other associated causes of generalised œdema, further investigation of the individual case should be made and necessary treatment prescribed.

Localised pathological œdema during pregnancy, although not common is not unusual. It is mostly met with in thrombophlebitis of either the superficial or deep veins of the lower limbs. Superficial thrombophlebitis occurs in pre-existing varicose veins and is not so serious. Thrombophlebitis of deep veins, adherent, obstructing or femoro-iliac thrombophlebitis, is a much more serious condition. It is characterised by acute swelling of the affected leg with pain. There is tenderness on the calf on sharp dorsiflexion (Homan's sign) of the leg. The limb is often cold, œdematous and whitish in appearance. There is general elevation of the temperature and leucocytosis.

According to Ochsner and DeBakey (1940) the swelling of the limb is due to arterial and venous spasm caused by phlebitis, thus leading to ischæmia and anoxia of capillaries with subsequent damage to their walls, resulting in extravasation of proteins and fluid into the tissue spaces. Frequently the limb becomes cyanosed distal to the arterial spasm.

Treatment should be mostly preventive. Improvement of the general vitality of the patient, daily regular exercise of the limbs and chest, prevention and cure of any source of sepsis and minimising trauma during the management of labour are some of the essential points in the prevention of this condition.

The active treatment consists of rest in the acute stage with local application of heat in some form, elevation of the affected limb, treatment of sepsis with antibiotics and chemotheraputic drugs and treatment of anæmia and other complications, if present.

Anticoagulants, such as heparin, dicoumarol, tromexan etc., have been used in recent years with very

satisfactory results. However, a careful watch must be kept on the prothrombin level of the plasma when these drugs are administered; otherwise, there is a danger of hæmorrhagic conditions developing. Patients are allowed out of bed as soon as the acute stage is over with some form of elastic bandage on the affected limb.

If there is any tendency to bleed during or after anticoagulant therapy, the latter should be withdrawn immediately and blood transfusion started. Intravenous water-soluble vitamin K in large doses (20-40 mgm.) is also indicated.

In a case of white-leg paralumbar sympathetic block offers prompt relief, when performed in addition to other treatments.

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## FEEDING BY THE RYLE'S TUBE*

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Fluid and nutrition are best given by the mouth. In certain cases fluid has to be given intravenously. Blood, plasma and its substitutes, hydroproteins and saline have their indications. Saline by the subcutaneous route, either alone or combined with glucose is not as frequently used as before. The procedure is painful. It takes a long time for the fluid to be absorbed and septic complications may follow. Moreover, sufficient nourishment cannot be given by this route. In the hospital, whenever there is difficulty in feeding a patient by the mouth a gastric drip apparatus is set up provided there is no contraindication to oral feeding. This type of feeding is not often employed to patients in domiciliary practice. It may be that the method is not widely known and there are misgivings about it.

It may be feared that it would be dangerous to put the Ryle's tube in an unconscious or severely ill patient, and that the tube may go through the respiratory passage and drown the patient with the fluid poured through it. With the Ryle's tube and the precautions suggested the danger is absent. Another misgiving is that it requires constant attention of a medical man or a nurse to run the apparatus. If the tube is introduced by a physician and if he visits the patient at least once a day the apparatus can be run efficiently. The working of the method, should be explained to a responsible person of the family. If the patient brings out part of the tube, the best procedure would be to take it off completely. The medical attendant can later reintroduce it.

Types of cases where feeding by the Ryle's tube has been found useful:

*Semiconscious patients*—Enteric fever, meningitis, severe toxæmia, etc.

*Unconscious patients*—Apoplexy, status epilepticus, poisoning, typhoid state, meningitis, encephalitis, cholæmia, uræmia, diabetic coma etc.

*Patients with dehydration*—If the dehydration is severe, it has to be initially controlled by parenteral administration of fluid.

*Conditions where the mechanism of deglutition is defective*—Bulbar palsy, post-diphtheritic paralysis, infective polyneuritis,

*Patients who refuse to take food*—Psychosis, anorexia nervosa, etc.

### Procedure of Feeding by the Ryle's Tube

1. The patient is restrained if he is restless.

2. A Ryle's tube is boiled. The bulbous end of the tube is lubricated with liquid paraffin and passed through one of the nostrils. The tube is pushed on till the second mark in the tube reaches the nose of the patient. It should be seen that the tube does not remain curled up inside the mouth. In that case it should be guided by putting a finger in the mouth.

3. The nozzle of a syringe is attached to the tube and suction is exerted when stomach contents will come out. It is thick slimy liquid, acid in reaction and sometimes bile-stained. A piece of paper or cotton wool held near the end of the tube will not be blown.

4. The end of the Ryle's tube is connected to a drip apparatus (Fig. 1).

5. Water is first poured. If it flows nicely the appropriate fluid is run in.

6. The tube is taken out once in 24 hours, cleaned, boiled and reintroduced through the other nostril. The procedure is continued till the patient is able to take fluid and nutrition by mouth.

* Based on a paper read at the Reunion of the Nilratan Sarkar Medical College.

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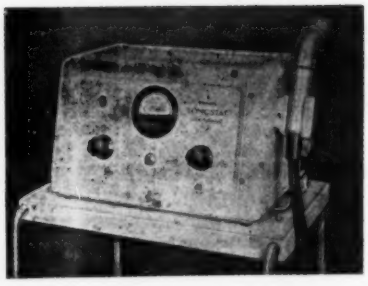

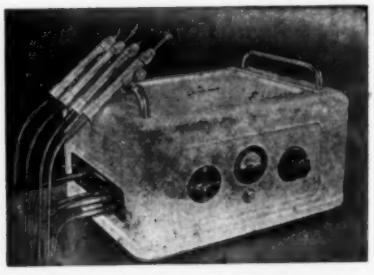

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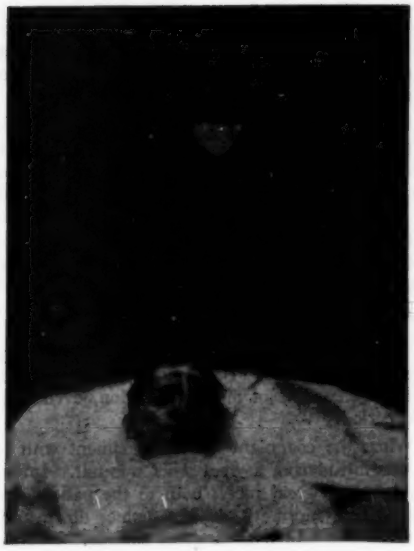

FIG. 1—SHOWING THE END OF A RYLE'S TUBE CONNECTED TO A DRIP APPARATUS

### FEEDS WHICH COULD BE GIVEN BY THE RYLE'S TUBE

1. Water, saline of different strengths, glucose water, albumen water, barley water etc.

2. Milk, milk products like whey, butter milk, skimmed milk and various proprietary preparations of milk.

3. Fruit juice.

4. Egg as egg-flip.

5. Soup, broth etc.

### ADVANTAGES OF THE METHOD

1. It is easy to set up the apparatus. Even conscious patients readily get accustomed to the tube.

2. Amount and nature of the fluid and nutrition can be regulated.

3. Medicines which are administered by the oral route can be given by the apparatus. (If a drip apparatus is set up for a patient suffering from typhoid fever, chloromycetin can be given by it. The drug is taken out from the capsules and suspended in a small amount of water. This suspension is taken in a syringe and pushed through the Ryle's tube).

4. With Ryle's tube the procedure is very safe. The tube is too long to be put inside the respiratory passage. Aspiration of stomach contents and holding of a piece of cotton wool or paper before the outer end of the Ryle's tube are additional measures of safety.

### CONCLUSIONS

Continuous or intermittent gastric drip through a Ryle's tube is a safe, easy, and efficient method of giving fluid and nutrition to patients who refuse or are unable to take them by mouth.

The method can easily be employed in private practice.

A plea is made for wider use of the method in suitable cases. It may be noted that sufficient nutrition can hardly be given by the parenteral route for a long time.

### ACKNOWLEDGMENTS

The experience about the feeding was gained at the Nilratan Sarkar Medical College Hospital, for which I am grateful to Dr. A. K. Dattagupta, Principal-*cum*-Superintendent of the hospital. My thanks are also due to my house-staff and the nursing staff of the hospital who gave the feedings.

## TREATMENT OF BURNS*

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The genesis and treatment of shock in burns have been omitted from this article and only the treatment of burns proper has been dealt with.

At the V. S. Hospital, where I am working, we get about 35 cases of burns a year. The actual figures of last 3 years are as follows:

Total number of cases admitted in:

| | | | | |
|---|---|---|---|---|
| 1949 | ... | ... | ... | 45 |
| 1950 | ... | ... | ... | 39 |
| 1951 | ... | ... | ... | 49 |
| | | | Total ... | 133 |

Of these there were 17 patients below the age of 12. In one case tetanus developed.

An analysis of causes, extent of burn, sex distribution and results of treatment are given below:

CAUSES OF BURN:

| | | | | |
|---|---|---|---|---|
| Stove or Sigri (including suicidal) | | | ... | 88 (66%) |
| Kerosene lamp | ... | ... | ... | 9 |
| Petrol ... | ... | ... | ... | 10 |
| Electricity | ... | ... | ... | 2 |
| Fire-works | ... | ... | ... | 5 |
| Hot fluids (scalds) | ... | ... | ... | 18 |
| Acid ... | ... | ... | ... | 1 |

* Read at the Scientific Section of the 28th All-India Medical Conference, Ahmedabad, Feb. 1952.

EXTENT OF BURN:

| | |
|---|---|
| Superficial (1st and 2nd degrees) ... | 42 |
| Deep (2nd and 3rd degrees) full skin thickness ... ... ... | 91 (67%) |

SEX DISTRIBUTION:

| | |
|---|---|
| Male ... ... ... ... | 22 |
| Female ... ... ... ... | 94 (70%) |
| Children under 12 ... ... ... | 17 |

RESULTS:

| | |
|---|---|
| Deaths ... ... ... ... | 78 (57%) |
| Within 2 days ... ... ... | 57 |
| After 2 days ... ... ... | 21 |

STAY IN THE HOSPITAL:

| | |
|---|---|
| Maximum ... ... ... | 100 days |
| Minimum ... ... ... | 10 min. |

With the co-operation of Police, I have been able to collect figures of the city of the last four years.

| *Year* | *Total No. of burns* | *Accidental* | *Suicidal* | *Industrial* | *Chemical* | *Electrical* |
|---|---|---|---|---|---|---|
| 1948 ... | 103 | 85 | 16 | 2 | ... | ... |
| 1949 ... | 91 | 75 | 9 | 3 | ... | 4 |
| 1950 ... | 114 | 102 | 8 | 3 | ... | 1 |
| 1951 | | | | | | |
| Upto 31-8-51. | 67 | 56 | 4 | 2 | 1 | 4 |

These figures indicate the problems in burns that we have to face. It is the women who suffer the most in our country and the reasons are obvious.

You must have also noticed that majority of burns are due to flames from *sigri* or stove and almost invariably these burns are of second and third degrees (partial or full thickness skin burns). These deep burns not only produce more shock but also are more liable to infection creating various complications.

This problem of extent of burns in these flames-burns depends on the type of clothing and the Gujarati *saree* plays a notorious part in these accidents. In my series very few cases had less than 18 per cent of the body burnt which is the lowest figure to produce shock.

In our country where hospital beds are so scarce, prolonged occupation of beds by burn cases is not a small economical problem.

It is our duty to study these problems in detail, as they face us, and try to find out measures to reduce the mortality figure.

Since 1927, I have been in constant touch with these problems, both in rural and urban areas. I still vividly remember the treatment that was followed about 25 years ago, at the G. T. Hospital, Bombay. Young girls, newly married and coming to Bombay, perhaps for the first time from rural areas used to be admitted, practically every other day from thickly populated Gujarati-localities of the area. Many of you might be aware of the crusade of the then coroner of the city, Mr. Athavle, against the use of stoves by Gujarati ladies.

The treatment followed was still more pitiable. Plasma was not known and even the saline had not passed the stage of subcutaneous infusion. Aqueous picric acid solution was in vogue in daily surface dressings. Removal of these dressings which used to get adherent was so painful and the time taken in extensive daily dressings was so prolonged that shouting and crying of the unfortunate patients did not only exhaust the patient but even the medical and nursing staff. You can imagine the conditions in a ward, if there were more than 3-4 cases at a time, a possibility not altogether uncommon. No wonder, a large number of patients used to die of mere exhaustion, even after the shock period.

When the coagulant line of treatment with tannic acid was introduced, a great relief was felt. Infrequent dressing was a great relief, both to the patient and the doctor. The mortality figures came down and the treatment was hailed as a great success. But soon it was found that all was not well with tannic acid treatment. No matter in what form it was tried, in deep burns—the common variety, sepsis supervened under the tanned area and at the periphery where tan was retracting. It prevented early shock but problems of late treatment were not much touched.

The hands and fingers, face, eyelids and neck which were commonly affected in our cases were found quite unsuitable for coagulant treatment.

Moreover, tannic acid proved to be a toxic substance causing central necrosis of liver.

The advent of sulpha group of drugs and antibiotics brought revolution in the treatment of burns. The present day treatment of burns with sulfa-vaseline and/or penicillin and recent understanding of fluid-electrolyte balance in body has not only further reduced the mortality of burns but has also diminished sufferings and miseries of patients. It is worth studying this treatment in detail.

The objectives in the local treatment of thermal burns are:

(1) To prevent and control infection of open wound.

(2) To cover the open wound by the simplest possible dressing that:

(*a*) protects it from the constant danger of re-infection,

(*b*) does not fix or destroy any part of the skin or subcutaneous tissue which remains viable when the patient is first seen,

(*c*) provides for drainage of serum that exudes from the burnt surface until it is checked

by pressure or the normal process of coagulation,

(*d*) exerts uniform moderate pressure over the burnt area and

(*e*) can be easily removed if infection develops underneath the dressing or if the burn involves the whole thickness of the skin.

(3) To keep the injured part at rest.

(4) To secure healing in the minimum period of time and with minimum loss of function.

*Control and prevention of infection*—Infection is the central problem in the treatment of burns and considered inevitable uptil now.

The sight of patients with extensive burns, complaining of agonising pains and with anxious look, having swinging temperature for days together, gradually developing secondary anæmia, and hypoproteinæmia in spite of treatment must be familiar to you all.

Can the modern advances in medical science not help these miserable patients?

If we can prevent sepsis in operated wounds with well worked out surgical aseptic measures, is it not possible to prevent infection of burnt areas which are definitely sterile to begin with?

Bourdillon, Colebrook, Dunkan Ross *et al.* have answered this question, with extensive studies of this problem at the Birmingham Accident Hospital. They have shown that:

(1) Burns are almost sterile on admission in the hospital.

(2) They become infective in the hospital mostly by cross-infection in the wards. Autogenous infection is rare.

(3) Micro-organism responsible in most cases are:

(1) Hæmolytic streptococcus.
(2) Staphylococcus aureus.
(3) Ps. pyocyaneus.
(4) B. proteus.

To prevent this cross-infection in the wards, they suggest that:

(*a*) Burn cases should not be treated in general wards. The should be either separate centres for these cases or they should be treated in separate cubicles in a general hospital.

(*b*) The rooms must be well ventilated and if possible there should be a mechanical unit working in each room, to supply continuous stream of filtered sterile air.

(*c*) Dressings should be carried out with strict aseptic measures; dressers must use mask and gloves; special care must be taken for parts like buttocks, perineum, axillæ etc., which are likely to remain exposed.

(*d*) Cleansing of floor and making of beds must be so adjusted as not to spread any airborne infection.

I do not know whether it is possible to open separate centres for burn cases even in big cities in our country or not, but I do think that if there is a will, it is possible to reserve a block or a small ward for burn cases with facilities to segregate septic burns from clean and newly admitted burn cases. In our country, there is enough light and ventilation and room-sterilising machines are not absolutely necessary. What we want next is the staff who would take interest in treatment of burns.

There is a good deal of discussion about the choice of drugs for local treatments. Some prefer 3 to 5 per cent sulphonamide cream, others sulfa-vaseline. Penicillin cream 200 units per gram is well talked off. Penicillin-lactose powder is preferred for exposure method. Recently aureomycin cream has been tried too.

We have tried penicillin cream in patients who could afford the cost, with very satisfactory results. But as a routine, we employ sulfa-vaseline gauze as the initial dressing, soon after the shock is combated. Ordinary hot saline is used for cleansing purposes. Cetavlon is better, but costlier. It is my impression that for 1st and 2nd degree burns, it matters very little whether we use sulfa or penicillin, provided we clean the burnt area well and open out all blisters and remove all epithelium carefully and provided we tie good pressure bandages and plaster or elastoplast them well, these superficial burns heal well within 10-15 days. Hardly two or three dressings are necessary during this period.

This local treatment alone is not so encouraging in 3rd degree burns, burns which are so commonly met with in our practice. In spite of modern antibiotics, infection occurs (precautions suggested by Colebrook etc., mentioned before, if undertaken minimise this infection) and the burns are changed into large granulating areas taking weeks to months to heal, leaving behind many a time contractures and hideous deformities.

It is necessary to resort to parenteral penicillin along with local treatment. In some of our penicillin-resistant cases, aureomycin by mouth controlled temperature very effectively.

Even after the shock-period, large amounts of glucose-saline, plasma and blood transfusions are necessary to combat dehydration and hypoproteinæmia. Severe anæmia usually follows and demands very energetic treatment.

This supportive line of treatment plays a great part in treatment of severe cases and should not be neglected.

*Skin Grafting*—According to Ross (Birmingham) the greatest area which could be treated by primary excision and early skin grafting was about 12 per cent in adults and 10 per cent in children. Primary excision

and grafting were indicated particularly in full thickness skin burns of the face and hand. To make out full-thickness skin burns from superficial burns is not easy.

Mac Jackson depends upon sensation to pinprick but cautions that in chemical burns the interpretation may be misleading. A late physical sign at about seven days was fine red stippling of the burnt area; this indicated that healing would take place.

In later stages, skin-grafting has a definite place and should not be unnecessarily delayed. Dressings with modern antibiotics, combined with parenteral systemic penicillin, usually control infection and burns take grafts well on the whole. The only difficulty is of getting enough skin to graft the patient whom modern resuscitative measures had saved.

Recently homografts alone or in combination with autografts have been tried with encouraging results.

*The exposure method of treating burns*—This is a new method of which Wallace (Edinburgh) is a great advocate. According to him the essentials of the technique are: systemic antibiotics; full exposure of the burnt area to keep it dry and cool and as much immobilisation as possible. In superficial burns the crusts on the exposed burns would separate after three weeks leaving a healed surface. In deep burns the slough must be removed at about the same time and the area grafted. He recommends as first aid that burns should be left alone and a clean sheet wrapped over the part. At the first dressing the burn was swabbed with 'Cetrimide,' blisters were removed and the area was dusted with lactose powder containing 10,000 units of penicillin per gramme. The powder was repeated four-hourly. One and a half million units of penicillin daily were administered systemically for six days. In deep burns, the crust and underlying slough were excised and the area grafted. The correct sequence was "crust, skin"; there should never be a raw surface. In brief, the advantages of the exposure method are: improved control of infection; more comfort for the patient; control of anæmia and hypoproteinæmia.

In tropical countries like ours, where nuisance of flies (and maggots) is so great and where paucity of trained staff is so severe I do not know how this exposure method will succeed. However, in selected cases, it will have its place.

*Recovery of function*—The ultimate aim of any treatment is full recovery of function. In burns, involving joints, small or large, the attending surgeon has to be very careful, right from the beginning. Passive movements of joints followed by active movement should be started as soon as the patient has settled down. Splints and dressings should be so applied as not to hamper with these movements. Patience and persistence are necessary to keep up the morale of the patient whose co-operation is absolutely necessary for good results. Plastic surgery and physiotherapy in its various forms will be necessary in the end to rehabilitate the patient.

*Recent experimental work*—A great deal of experimental work has been carried out recently to understand the so-called secondary toxæmia which carries away a large number of severely burnt cases in the 2nd week of treatment. It is a common observation that in spite of usual local and general treatment, defence forces of the body suddenly collapse and patients who have survived severe shock and who have given good hopes of recovery during the first few days suddenly take a bad turn and succumb.

Repeated blood examination in severely burnt cases has shown a constant pattern of leucocytic count. Within a few hours of burning the number of circulating eosinophils is either falling or has fallen to a low or zero value. Eosinopenia is maintained for a variable number of days after which the count begins to rise. Later a peak value is reached and then the eosinophilic count declines. Lymphocytopenia and a neutrophilic leucocytosis accompanies the initial fall of eosinophils.

The striking parallelism between these changes after burns and physiological effects of A.C.T.H. and cortisone suggest that a relation may exist between the reaction to burn trauma and action of these substances.

Sodium and chloride retention, increased protein loss, hyperglycæmia, increased nitrogen excretion, degenerative changes in lymphoid tissue and increase in urinary excretion of 17-ketosteroids are seen in patients with burns and in patients given A.C.T.H.

It appears that eosinopenia is a sensitive index of adrenocortical activity in burns that fails completely in severe cases.

Whitlaw obtained good results with A.C.T.H. therapy in a patient with over 60 per cent of the body surface severely burnt.

He also pointed out that homologous pinch grafts from donors which usually fail to take were successful in a patient treated with A.C.T.H.

These observations are startling and promise to open out a new line of treatment in burns.

*SPECIAL ARTICLE*

## SOCIAL MEDICINE AND ITS IMPORTANCE

S. S. BHARARA, D.P.H.,
*Kanpur*

Social medicine is one of the branches of general sociology. No clear definition of the subject is available although I will try to explain it as best as possible. The scope of the term is very wide and extensive. Social medicine in a nutshell refers to the study of an

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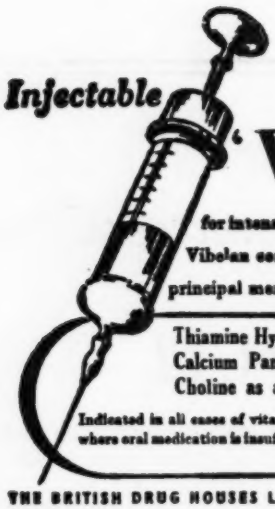

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individual patient who is projected to the community and of the community which is focussed back to the patient. It deals with those phases of preventive medicine in which the social dangers are centered round individual patients and the social causes of the diseases are studied and remedied. Economic and environmental circumstances of the patient and of the community in which the patient lives are explored and on these socio-economic factors are recommended methods of the eradication of diseases that not only endanger the health and life of the patient concerned, but also the well-being of the community. The term "social medicine" is thus used to give an all-embracing title to the application of medical science other than curative and diagnostic so that in the scope of this title one can include not only the study of the influence of general and non-specific social and economic conditions of the health of the community but also the older and more exacting disciplines of public health. Social medicine has a considerable overlapping between itself and public health and industrial health etc., and it can be rightly said that social medicine is a more modern term of public health plus a little extra, *viz.*, industrial health, social services, psychological adjustment and the remedial services of a community. In social medicine observations and researches are made in connection with groups or population. Social pathology is a related science of social medicine just as human pathology is a related science of clinical medicine. Social medicine has many links with clinical medicine and the interplay of clinical work, statistical studies and organised public health has an integrating value which would foster a mutual interest among the exponents of each of these fields of medical activity. Social medicine has gained immense importance in foreign countries where with the advancement of civilization, the people have socially become highly organised. Unfortunately, in our country we have not paid much heed to this subject, upon which depends the health of the people, health of the nation and, through it, the prosperity of a country.

Dr. A. C. Ukil, M.B., M.S.P.E., etc., Col. A. C. Chatterji, (the ex-Director of Health Services, West Bengal), Dr. B. C. Das Gupta (the present Director of Health Services, West Bengal) and Col. C. K. Lakshmanan (Director of the All-India Institute of Hygiene and Public Health, Calcutta) have prepared a draft note and a curriculum on the subject of 'Preventive and Social Medicine' which the Calcutta University is likely to adopt for the under-graduate medical students.* If and when adopted the Medical Council of India will be approached to recognise it and thus all the universities in the country will adopt it as one of the major subjects in the undergraduate course of the medical students. This subject will then entirely replace 'Hygiene and Public Health,' now being taught in the medical colleges. This will afford the students to study community anatomy, physiology, pathology, diagnosis, treatment and prevention from the point of view of the patients' relations to his family and community. The students will be required, in addition to the study in hospital wards, to study the environmental socio-economic aspects of the subjects both in rural and urban community fields. For example, a case of tuberculosis will not only be just diagnosed and treated for the disease but his social and environmental circumstances that have been responsible for his illness, or that will be responsible for carrying on effective treatment and after-cure rehabilitation, will be explored. The community which may be exposed to the risk of catching infection from him will be advised for possible safeguards etc., etc. It is expected that the introduction of this subject and its replacing the old subject shall entail a 2 year's course as compared to the one year's course.

In England, in the undergraduate course the formal teaching in the subject of Social and Preventive Medicine is given in a combined course with the departments of Medicine, Pathology, Child Health, etc , and a certain amount of individual social medicine is taught, in which, using hospital patients as the starting point for investigation and instructions, attempt is made to illuminate the ætiology of the illnesses by investigating their home and work conditions and then it is tried to demonstrate the need for intelligent hospital treatment and after-care in the interest of the complete recovery of a patient in the circumstances in which he lives and works to earn his living including the psychological adjustments at different stages. This is what is termed as socio-medical case-taking.

The teaching in recent years in post-graduate work in England has emphasised more and more the need for statistical control of design and interpretation of investigations and so, much more biostatistics is being taught in D.P.H. course than in the past. In India, the D.P.H. training which is given at the All-India Institute of Hygiene and Public Health, Calcutta, has two parts of the Course. In the first part they teach subjects of Microbiology, Nutrition, Biochemistry and Public Health Chemistry. In England they are devoting more and more time to the study of Social Medicine. Not only the undergraduate students are required to develop an outlook of sociomedical work but the post-graduate students of the D.P.H. course are also taught social medicine as the main subject in the first part of the course. In the first part of the D.P.H. course at Edinburgh terned as C.P.H. course, they impart instructions in the following subjects:

1. Social medicine as an instrument of social policy. The History of Public health and Public assistance. The evolution of the central and local authorities in relation thereto. The evolution of law in relation to Health, Public assistances, and social security. The existing functions of central and local authorities and voluntary organisations and the nature and objects of the public health and medical services administered by them. Social security and the

* This has since been done—ED., *J. Indian M. A.*

agencies for the relief of poverty and the promotion of social welfare.

2. The nature and sources of information bearing on the health of the people and its numerical presentation. The influence on physical and mental health of environment, including house and occupation, economic circumstances, nutrition and personal hygiene. The nature and causes of infection, their source and control.

3. International Health Organisations. The influence of heredity on Health. Demography. Applied Psychology. The Principles of Health Education. The Principles of Physical Education.

From the above it is evident that the entire subject for C.P.H. course is nothing else but social medicine split into three parts.

It is a pity, no attention is paid to this subject as yet and it is even not a recognised subject so far either in the under-graduate course or in the post-graduate course in most universities in India. A modern fresh graduate on coming out of the medical college just knows how to diagnose illnesses and treat a patient in a very general sort of way. He does not have the outlook to safeguard the health of the community, or to secure the community from the patient who is lying ill and acting as a potent source of danger to everybody around him. He even cannot correctly diagnose and treat a patient unless he has basic knowledge and training of probing into the social and economic factors which are responsible for the illness. He cannot devise or investigate the mode of rehabilitations after the illnesses are over so that the economic balance of the affected families do not miserably get upset. It is this aspect of the patients which is more important than their illnesses themselves. A single patient may not only upset the social, economical, financial and mental balance of his family but may also produce ripples in the calm water of the health of the community around him which may at times become uncommandable violent typhoons causing havoc all round. The present outlook of medical men has got to be changed and community sense and social sense have got to be developed, because in that lies the good of the patient and his family, nay the whole community and the nation. To study the causation of disease among the multitude of social, economic, nutritional, occupational and psychological groups in a civilised community is of as great importance as the *ad hoc* treatment of this man's ulcer and the isolated repair of that man's injury. The subject of social and preventive medicine thus ought to get recognised and introduced immediately in the under-graduate course and so should it be recognised and introduced in the post-graduate course. The social services are being organised in different states and when the country is marching towards high social organisation, there is no reason why Social medicine should not be introduced at an early date and placed on equal footing, if not better, with the main subjects of Anatomy, Physiology, Pathology, Medicine or Surgery.

ACKNOWLEDGMENT

My thanks are due to Drs. A. C. Stevenson M.D., M.R.C.P., D.P.H., Professor of Social and Preventive Medicine, Queens University of Belfast; H. A. Sandiford M.C., D.P.H., Medical Director, Empire Medical Advisory Bureau London and A. C. Ukil, M.B., M.S.P.E., for the valuable information extended to me and for their views on the subject of Social and Preventive Medicine.

*CASE NOTES*

## ACUTE ASCENDING PARALYSIS

B. B. MUKHERJEE, M.B. (CAL.), M.R.C.P. (LOND. & EDIN.),

*Disergarh, Burdwan, West Bengal*

INTRODUCTION

In the year 1859, Landry first described under the name " acute ascending paralysis " a case where there was acute flaccid paralysis without sensory disturbances affecting first the legs, then the arms, and then the trunk, respiratory muscles and neck and finally the cranial muscles were involved. Death occurred from respiratory failure. Postmortem examination of the nervous system did not reveal any morbid changes. He subsequently described it from an analysis of 10 cases.

Since then a large number of cases has been observed. The diagnosis of acute ascending paralysis is restricted to cases where there is—

(1) Acute flaccid paralysis with loss of reflexes starting in the legs and rapidly spreading up.

(2) No objective sensory disturbance. Sphincter troubles are absent, or if at all present, they are only temporary.

(3) If the patient survives, the recovery is complete.

(4) If the patient succumbs, no gross lesion is detected in the central nervous system on post-mortem examination.

It is difficult to say whether ' acute ascending paralysis ' as described by Landry is a seprate disease entity but the same symptom complex may be produced by a number of different causes which are as follows—

(1) Acute febrile or acute toxic or acute infectious polyneuritis—It is doubtful if it is justifiable to draw a sharp distinction between this condition and acute ascending paralysis for probably there is no essential distinction between them. Absence of striking ascent of the paralysis and a less acute onset in acute febrile polyneuritis are probably the points of differentiation. Absence of any sensory loss in the periphery of limbs

is also said to be a more marked feature in acute ascending paralysis. But distinction between these two conditions can hardly be made on grounds so vague. The case of acute ascending paralysis described later might as well be diagnosed as a case of acute febrile polyneuritis.

(2) Some cases of acute anterior poliomyelitis may be very similar and almost indistinguishable. The history of an epidemic, the age of the patient, the asymmetry of the affection and residual paralysis may be of help in differential diagnosis.

(3) Neurological complications of measles and German measles may rarely produce an almost identical clinical picture.

(4) Rare cases of rabies in man may take the form of acute ascending paralysis. Hence history should be taken in all such cases of a possible infection from a rabid animal.

(5) The bite of Rocky Mountain wood tick, *Dermacentor andersoni stiles*, may cause a similar ascending paralysis.

### Case Report

A cultivator aged 36, thin built and in apparent good health, had an attack of fever, malaise and headache which lasted for about 10 days. The fever passed off and he kept well for about a week at the end of which period he suddenly felt tingling and extreme weakness in his legs. This was followed by similar tingling and extreme weakness in his upper arms. Shortly later, the patient found difficulty in deglutition and speech. The onset of tingling and weakness in the limbs was associated with another bout of fever. It took 2 to 3 days from the onset of weakness in the lower limbs to the development of difficulty in deglutition and speech. The patient was admitted in the hospital at this stage and on examination revealed the following:

Partial paralysis of the pharynx and the palate; complete paralysis of the 7th cranial nerves—both sides; complete flaccid paralysis of the upper and lower limbs. The proximal muscles of the limbs were as severely affected as the distal muscles. The intercostal muscles and the muscles of the trunk and neck were weak. The diaphragm was not involved.

No objective sensory disturbance was detected. The paralysed muscles of the limbs were tender on moderate pressure.

Tendon jerks in the limbs were absent; abdominal reflexes were lost. Plantar reflex—absent. There was retention of urine.

Oral temperature was 100°F and there were no signs of toxæmia. The apex beat of the heart was not displaced. P/R—110/30 per minute. Blood pressure—115/75 mm. Hg. There was no papilloedema.

Blood: W.B.C—8,900 per c.mm. of blood with polymorph—73 per cent. The Kahn test was weakly positive.

C.S.F.—The pressure was slightly increased and the fluid was crystal clear, with cell count of 30 per c.mm., the cells being mononuclear.

The diagnosis was acute ascending paralysis.

*Progress of the case*—The condition of the patient remained stationary for a few days. Nasal feeding had to be resorted to for the time being as the patient was unable to swallow. The bladder was regularly evacuated by catheterisation for retention. The temperature came down to normal within a few days of his admission. Thereafter he gradually improved. The paralysis of the palate and the pharynx cleared up first followed by recovery of intercostal, neck and trunk muscles. Face muscles recovered later. The muscles of the lower limbs were the last to recover. He was discharged from the hospital on the 28th day of his admission when he was able to walk with support. The muscles did not show any marked atrophy.

He was examined three months later and found to have almost completely recovered.

### Summary

A case of acute ascending paralysis has been described the clinical picture of which differs in no essential way from that of acute febrile polyneuritis. The distinction between these two conditions is possibly artificial.

It has also been discussed that the symptom complex of 'acute ascending paralysis as described by Landry may occur from a number of different causes.

*Acknowledgment*—I wish to thank Dr. N. C. Sen, F.R.C.S., D.G.O., and Dr. A. B. Mukherjee for their valuable suggestions and criticism.

My thanks are also due to Captain S. K. Ghose and Dr. N. Banerjee for their careful management of the case.

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## MULTIPLE PARASITIC INFECTION OF THE INTESTINE WITH DUODENAL ULCER

INDU BHUSAN BHATTACHARYA, M.B. (CAL.),
*Resident Physician,*
*R. G. Kar Medical College Hospitals,*

A Hindu, male, aged 20 years, shopkeeper, was admitted to the Bengal Immunity Therapeutic Ward of the R. G. Kar Medical College Hospitals on 14-9-51, for the following complaints:—

(*i*) Pain over the epigastric region—7 months.
(*ii*) Acidity and heartburn—7 months.
(*iii*) Flatulence and indigestion—1 year.

*History of onset*—The patient was suffering from flatulence and indigestion for one year. He had often anorexia and constipation during this period. For seven months he was having pain over the epigastric region. The pain started

three to four hours after taking food and was relieved by taking food or even water. He was having acidity and heartburn for seven months associated with the pain over the epigastric region. He was gradually losing weight.

*Past history*—He was very irregular in taking meals for the last few years. No history of melæna or addiction to any drugs. There was a history of passage of a few round worms with the stool one year back.

*Family history*—Nothing suggestive.

*Condition on admission*—A young adult, looking pale and ill with marked emaciation; pulse—78 p.m., regular and of moderate volume and tension; respiration—18 p.m., regular; B. P.—S/D=100/65 mm. of Hg. Body weight—5 st. 4 lbs.

ALIMENTARY SYSTEM AND ABDOMEN—Pain over the epigastric region three to four hours after food, acidity, heartburn, anorexia and constipation. Tongue—moist, flabby and the dorsum coated with thick white fur. Liver—just palpable, firm, not tender. Spleen—not palpable. Pelvic colon—thickened and tender. Tenderness over the epigastric region.

CIRCULATORY SYSTEM: Moderately anæmic, otherwise nothing abnormal detected.

NERVOUS, ENDOCRINE, INTEGUMENTARY AND OTHER SYSTEMS: Nothing abnormal detected.

LABORATORY EXAMINATIONS: *Blood* (General). Hb.—50 per cent, R.B.C.—2·2 m./c.mm. W.B.C.—6,500. Polynuclears—60 per cent, lymphocytes 28 per cent, eosinophils—10 per cent, monocytes—2 per cent. No abnormal cell found. No M.P. detected.

BIOCHEMICAL EXAMINATIONS OF THE BLOOD: Creatinine—1·2 mgm. per cent, calcium—6·8 mgm. per cent E.S.R.—15 mm. at the end of one hour. Fasting Blood Sugar—70 mgm. per cent. Total protein—4·8 gm. per 100 c.c.; albumin—2·9 and globulin—1·9 per 100 c.c.

URINE EXAMINATION: Nothing abnormal detected.

STOOL EXAMINATION: (By ordinary and concentration methods)—Semisolid, acid in reaction. Occult blood test—negative on repeated examination. Cysts of *Ent. histolytica* in fair number and of Giardia intestinalis in plenty. Ova of ascaris, ankylostoma duodenale and trichuris trichuria in fair number.

FRACTIONAL TEST MEAL: Fasting juice was eighty c.c. Both free and total acid was found to be higher than normal. The acid content was highest after one hour fortyfive minutes of taking meal. After one hour fortyfive minutes both free and total acids declined gradually. Starch was absent in samples after two hours of taking the meal. Bile was positive in all the samples after one hour fortyfive minutes of taking the meal. Blood was absent in all the samples.

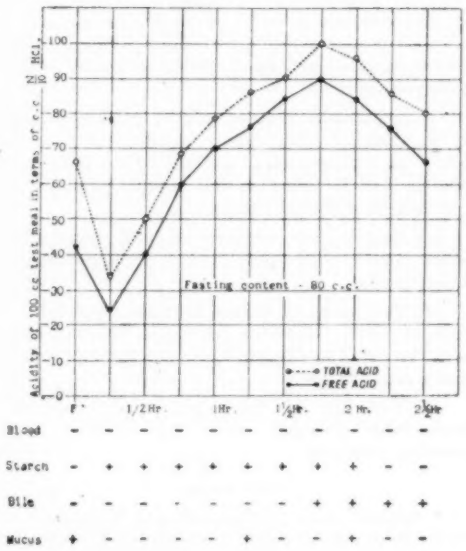
SKIAGRAPHY—A barium meal investigation of the stomach and duodenum was done which showed deformed and tender duodenal bulb on x-ray screen.

### TREATMENT

In addition to usual general treatment (rest in bed, nourishing diet, hæmatinics and by hygienic measures the patient was treated specifically as follows:—

*Giardiasis*—Mepacrine hydrochloridum (B.P.) tablet—one and a half gr. each one t.d.s. after food for 5 days.

FRACTIONAL TEST MEAL




*Ascariasis*—Santonin gr. ii, hydrarg subchlor, gr. i, sodi bicarb gr. v in a pulv at bed time followed by s.s. magnesium sulphate one ounce the following morning.

*Ankylostomiasis*—Preparation—Calcium lactate and glucose powder, aa gr. xx. in a pulv. t.d.s. after meal for 2 days.

*Treatment*—Carbon tetrachlor—m x, oil chenopodium—m v, in capsule. Three such each at an interval of one hour in the morning followed by s.s. magnesium sulphate, one ounce, one hour after the ingestion of the last capsule.

*Amœbiasis*—5:7 Di-iodohydroxyquinoline—3·2 grs. each tablet T.D.S. for ten days after meals.

Retention enema with Na-salt of 7-iodo-8-hydroxy-quinoline—5 sulphonic acid—2½ per cent solution for six consecutive days.

After a fortnight, another course of treatment for ascaris and ankylostoma was repeated and subsequently the stool was found to be free from ova and cysts on repeated examinations (concentration method). As the patient still complained of pain over the epigastric region after meal and a deformed and tender duodenal bulb was detected on x-ray screen, he was kept under modified Sippy treatment which was as follows:—

*Duodenal ulcer*: Tincture belladonna m. x. ½ an hour before meals and calcium carb, bismuth sub-carb, magnesium carb and diastase) 2 teaspoonfuls ½ an hour after meals. Milk diet—4 oz. every 4 hours from 6 A.M. to 8 P.M. Olive oil—one ounce at 11 P.M.

With these treatments he was relieved of all the symptoms and gradually gained in weight. (Body weight at the time of discharge—6 st. 2 lbs.). He was discharged on 7-11-51 in good condition. The blood examination report at the time of his discharge was as follows:—

Hb.—75 per cent, R.B.C.—3·53 million; W.B.C.—6,100, poly—68 per cent, lympho—28 per cent, mono—2 per cent,

eosino—2 per cent. Total protein—5·2 gms. per cent. Albumin—3·1 gms. and globulin—2·1 gms. per cent.

## Discussion

This is an unusual case in the sense that combination of so many intestinal parasites with duodenal ulcer in a single individual has been very rarely reported in the literature.

Hyperacidity, avitaminosis, trauma, vascular disease, toxic, neurogenic and dietetic factors are all known exciting agents for the causation of peptic ulcer. We know of ulcer families and of inherited ulcer temperament. Wolf and Wolff (1942) have shown that, " the stomach shares with the face the vascular effects of emotion, going pale with fear and depression, red with wrath; and that the mucosa of a stomach so engorged will bleed even if stroked gently with a glass rod. The occurrence of " Curling's " ulcer is known to us. Yet any single causative factor for peptic ulcer has not been found out.

This was a case of peptic ulcer complicated with intestinal parasitism. Cysts of Giardia and *Ent. histolytica*, ova of ankylostoma, ascaris and trichuris trichuria were detected in the stool. Thus in a single individual was a museum of intestinal parasites. The ascaris often produce irritation in the intestinal tract giving rise to colic. Their presence in the bile duct, stomach, duodenum, larynx, peritoneal cavity, middle ear and in many other places have been reported in the literature. Often they produce obstruction in the gut by getting matted together.

Ankylostomas inhabit the duodenum and jejunum in large numbers. They are attached to the mucous membrane by means of their hooks. They may produce intestinal catarrh and epigastric pain. Wells (1950) removed two hookworms from the posterior pharyngeal wall of a girl of twentyone who had a history of burning pain in the throat. Cases are on record where ankylostomiasis have been mistaken for early pyloric neoplasm and gall bladder disease.

Pseudo-ulcerous syndrome due to amœbiasis has been reported in the literature. Deriu and Pirastu (1951) with the help of radiological investigations have shown persistent hypermotility and hypertonus of the gastroduodenal portion of the gut in a number of chronic amœbic dysentery cases.

Tripodi (1951) studied on twenty cases of chronic intestinal amœbiasis for gastric acidity and radiological appearances after a test meal. He found hypochlorhydria in five of them of whom one had indications of a duodenal ulcer and another of a gastro-duodenitis. Another five showed normal acidity of which one showed radiological evidence of a periduodenitis. Eight cases had hyperchlorhydria of which four had duodenal ulcer. The remaining two had achlorhydria.

The writer has seen four ward cases where fractional test meal showed hyperchlorhydria and stool examination revealed *Ent. histolytica* cysts. All were relieved of their symptoms with anti-amœbic treatments.

Colonnello (1949) after studying sixteen cases of gastroduodenal ulcer in patients suffering from chronic amœbic colitis, suggested of the existence of a correlation between chronic amœbic colitis and gastroduodenal ulcer. Slutzky (1950) has concluded that *Ent. histolytica* might cause ulceration not only in its usual situation but also in the duodenum and produce symptoms of duodenal ulcer.

Boehncke (1950) has warned that trichuris should not be regarded with indifference. Their eggs in the stool might explain umbilical colic, symptoms suggesting appendicitis or tuberculosis of the ileocæcal glands.

Giardia intestinalis has been found in association with *Ent. histolytica* in many cases. Castellani has called Giardia intestinalis a ' Pilot parasite.'

Thus we find that ascaris, ankylostoma, *Ent. histolytica*, Giardia intestinalis and trichuris trichuria all might inhabit the gut. All these might irritate the duodenum. So in a case where all those parasites were present, can we not expect such a degree of irritation to the duodenum which might produce ulceration in that area, if they themselves do not produce it directly?

The patient was cured at least temporarily, if not permanently. The writer will be interested to note the experience of others in this matter.

## Summary

A case of intestinal parasitism with duodenal ulcer is described. Some of the possible causes of duodenal ulceration have been reviewed. Intestinal parasitism as a predisposing factor for duodenal ulcer has been suggested.

## Acknowledgment

In conclusion, I have to express my indebtedness to Dr. A. Chakravarty, M.B. (CAL.), F.R.C.P. (EDIN.), F.R.S.E., Physician-in-Charge, B. I. Therapeutic Ward and the Superintendent, R. G. Kar Medical College and Hospitals for their permission to report this case and to Major P. K. Guha, M.B. (CAL.), and Dr. N. Bhadra, M.B. (CAL.), for their helpful advice and criticism in preparing the notes.

All the medicines were kindly supplied by the Bengal Immunity & Co., Ltd.

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# FACIAL PALSY DURING AN ATTACK OF MUMPS

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*Medical Officer, Civil Hospital,*
*Thair, Osmanabad District (Hyderabad-Deccan)*

Namdev, aged 29 years, came to the hospital on 15-9-1951 with the complaint that he had pain and swelling over the cheeks for three days.

*History*—About three days before his admission into the hospital, the patient felt unwell and had a slight headache. He also had fever attended with rigor. This he took for an attack of malaria and did not do anything. The next day, a swelling was noticed over his right cheek. He applied hot fomentation over the swelling and also a counter-irritant but the swelling did not diminish in size. The day after he noticed a swelling over the other cheek also. It was then that he got admitted into the hospital. He complained of great pain in the region of the swellings, could not open his mouth freely and consequently, was unable to take his food comfortably.

*On examination* the patient looked ill. The temperature was 100°·4 F. Swellings were noticed over both parotid regions. The skin over the areas appeared red. The areas were tender and somewhat painful. From the history and clinical findings, a diagnosis of mumps was made and the following treatment was instituted:

Ichthyol glycerin locally; aspirin and a diaphoretic mixture by mouth; potassium chlorate gargle; rest in bed; fluid diet.

The patient, after an interval of three days, came to me with facial palsy of Bell's type on the right side. The history was that he had a peculiar sensation on the paralysed side while having his lunch and had difficulty in washing his mouth after lunch. There was no history of exposure to cold. On examination, the swellings over the parotid regions were as before and had not gone down in any way.

A diagnosis of facial palsy (lower motor neurone type) was made and the following treatment instituted: counter-irritants locally; vitamin $B_1$ 100 mgm. daily parenterally.

*Progress*—After about a week of the above treatment, he was steadily improving. The parotid swellings were going down and the facial palsy improved after twelve days.

## DISCUSSION

Facial palsy of Bell's type has occurred during an attack of mumps. It may be that the two conditions are not related to each other and facial palsy in this case may be purely coincidental. But the fact that the other causes of facial palsy of this type are conspicuously absent in this case cannot be overlooked. On the other hand, it is not difficult to conceive of the two conditions as related to each other. The facial palsy in this case may be due to one or both of the following factors: 1. Mechanical pressure on the facial nerve as a result of the tension of the swelling resulting in a temporary paralysis and 2. Infiltration of the facial nerve also by the virus of mumps causing a palsy of the nerve. The former seems to be the more correct explanation.

## CONCLUSION

A case of facial palsy occurring during an attack of mumps is presented. The following points of doubt are to be cleared: 1. Incidence of facial palsy in mumps and 2. Cause of the palsy.

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Cases of facial paralysis during or after mumps have been described. Such paralysis may be due to a peripheral lesion due to an extension of inflammation from the parotid gland to the nerve or it may be due to an intracranial lesion. —Diseases of the Nervous System, in Infancy, Childhood and Adolescence by Frank, R. Ford. Balliere, Tindall & Cox, London.—ED., *J. Indian M. A.*

## POST-GRADUATE TRAINING IN MENTAL DISEASES

One or two Clinical Assistantships may be available to young medical men (with qualifications registrable with the Irish Medical Council or the General Medical Council of U.K.) at Grangegorman Mental Hospital, Dublin, Ireland. Terms would be as follows:—*Salary*: 150/- per annum, with board, lodging, laundry and attendance: 20/- per annum temporary bonus. *Duration*: 6 months, commencing 1st February, 1953.

Candidates are requested to apply through the local branches of the Indian Medical Association, giving full details. The local branches are requested to forward the applications to the Provincial Branches at an early date. The Provincial Branches are requested to make early selections and send their recommendations to the Central Office not later than 30th September, 1952. The final selection of the candidates may be made at the time of the October meeting of the Working Committee.

It may be pointed out that an Indian doctor of Patna who was sent early this year by the I.M.A. to Dublin is doing well and has been given an extension for further 6 months up to 31st January, 1953.

S. C. SEN,
*Hony. General Secretary,*
Indian Medical Association,

*Hanging Bridge, Daryaganj,*
*Delhi 7.*

JOURNAL OF THE
INDIAN MEDICAL ASSOCIATION
CALCUTTA, AUGUST, 1952

## HEREDITARY ECTODERMAL DYSPLASIA

Hereditary ectodermal dysplasia is a rare but highly interesting disorder of which two forms are known. In one variety, there is dystrophy of the hair and the nails but there is no disorder of perspiration. This type is known as the hydrotic type. In the other variety, there is complete absence or almost complete absence of sweat glands and sebaceous glands of the skin. Thus, there is complete or almost complete absence of visible perspiration. This type is, therefore, called the anhydrotic type. Besides anhydrosis there are hypotrichosis and complete or almost complete anodontia or a defective development of the teeth. Between these two forms intermediary forms may occur and occasional *forme frustes* may also be met with. All these different types are characterised by one single feature—a defect in the development of the ectoderm—which may be transmitted to other generations. Therefore the name ' hereditary ectodermal dysplasia ' was suggested by Weech in 1929.

If the developmental defect starts in very early uterine life the absence of sweat glands and sebaceous glands tends to be a characteristic feature of the ectodermal dysplasia. Brodie and Sarnat (1942) pointed cut that the teeth are affected if the developmental defect starts before the 6th week of fœtal life.

There are two views regarding the transmission of these developmental defects. One view states that the transmission is sex-linked and recessive like hæmophilia and colour blindness. The other view is that the transmission is mendelian and not sex-linked. Thannhauser (1938) points out that the anhydrotic variety is mostly transmitted in accordance with the first view while the second view holds good for the hydrotic type. The anhydrotic type thus occurs mostly in males while the hydrotic type in both males and females and the incidence is almost equal.

Besides the forms mentioned above, there are special forms of ectodermal dysplasias.

Thannhauser (1936) described an anhydrotic type with adrenal medullary (an ectodermal structure) insufficiency with abnormalities of bones of the skull. Congenital cataracts in sisters have been reported (Cole *et al*, 1945). A syndrome of grouped comedones has been described (Whittle 1947). There are instances of anhydrosis with neurolabyrinthitis. Keratosis palmaris et plantaris and epidermodysplasia hystricoides bullosa (Reys, 1945) may be special forms of ectodermal defect. Intractable diarrhœa and intolerance to food may be found in some anhydrotic forms (Lipton and Roberts, 1950). Other special forms have been described by Hanhart (1947).

Although the disorders described under the caption of ectodermal dysplasia involve mostly the ectoderm, non-ectodermal dysplasias may co-exist. For instance. frontal bone bossing with an apparent depression of the bridge of the nose, convexity of the roof of the mouth, prominence of the supraorbital ridge and thickening and eversion of the lips are non-ectodermal defects. Cole *et al* (1941) have described combined ectodermal and mesodermal dysplasia with osseous involvement. Some authorities (Ormsby and Montgomery, 1948) have placed Werner's syndrome and Rothmund's syndrome in the category of congenital ectodermal defects and also point out that poikiloderma congenitale and pachyonychia congenita may be related disorders.

Related to ectodermal dysplasias are other well-known disorders like tuberous sclerosis, neurofibromatosis, Rud's syndrome and neurocutaneous or neuro-ocular angiomatosis which have been described at times as ' congenital ectodermoses ' (Yakavler, 1936).

The historical development of ectodermal dysplasias has been reviewed by Thannhauser (1938). One interesting feature in this history is the description of Hindu families of anhydrotics by Widderburn in 1883 and by Thadani in 1921.

The third contribution from India on this subject comes from Lipscomb and Manonmani whose observations are being published in this issue of the Journal. These authors give an account of three cases of the anhydrotic form. Two of these are sisters and are the products of consanguineous marriage, the importance of which factor has not yet been assessed. One interesting feature noted by Lipscomb and Manonmani is ozæna in their two cases. Blood cholesterol in all their cases seems to be rather high although the authors do not specially emphasise this point.

No treatment is yet available for the ectodermal dysplasias. For the anhydrotic form, general care is of great importance. The patient should not undertake any hard physical labour, should avoid hot baths and hot surroundings as all these make the condition of the anhydrotic miserable and hyperpyrexia may punctuate the course of the disease.

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## WORLD MEDICAL ASSOCIATION

The Sixth General Assembly of the World Medical Association will be held in the Parliament building at Athens in Greece from October 11 to 17, 1952. Representatives of the National Medical Associations of the world will assemble to discuss various matters of importance to the people in general and the medical profession in particular. The Indian Medical Association will be represented at this Assembly by the Honorary General Secretary and the Editor of the Journal of the Indian Medical Association. The Third Annual Meeting of the Medical Editors of the World will also be held at Athens on the 17th October, 1952. The Editor of the Journal of the Association will also attend this annual conference of the Medical Editors.

The World Medical Association represents National Medical Associations of at least 41 countries and is a non-governmental international organisation of the medical profession of the world. Its chief objective is to assist in raising levels of health by means of an effective liaison amongst the doctors of the world by dissemination of medical information through association with other international bodies working on similar lines. The World Health Organisation, on the other hand, is a specialised agency of the United Nations (UNO) and is an inter-governmental body having total membership of 75 countries and charged with the responsibility to act as directing and co-ordinating authority on international health work. It is noteworthy that an informal conference was held between the officials of the WMA and the WHO last year and important decisions on medical education and medical supplies etc., were arrived at. It was also agreed at that conference that active co-operation should exist between the regional WHO bodies and WMA.

Medical science is ever expanding as a result of experimental observations made throughout the world. An exchange of information and documentation between the National Medical Associations on the one hand and the health departments of the respective Governments on the other, hand is therefore essential. We believe, such annual conferences of the representatives of the National Medical Associations, of the Medical Editors, and joint meeting of the representatives of WMA and WHO would benefit the governments, the organisations concerned, the medical men and ultimately the people in general.

THE WORLD MEDICAL ASSOCIATION
6TH GENERAL ASSEMBLY

TENTATIVE SCHEDULE

| | |
|---|---|
| *Saturday, October 11* | |
| 10-00 A.M. to 6-00 P.M. | Registration in Parliament Building. |
| *Sunday, October 12* | |
| 10-00 A.M. ... ... | The Opening Session of the 6th General Assembly. |
| 12-00 noon ... ... | Lunch. |
| 2-00 P.M. to 5-00 P.M. | Session of General Assembly. |
| 7-30 P.M. ... ... | Dinner to Delegates and Ladies at Hotel Grande Bretagne tendered by the Panhellenic Medical Association. |
| *Monday, October 13* | |
| 10-00 A.M. ... ... | Session of General Assembly. |
| 12-00 noon ... ... | Lunch. |
| 2-00 P.M. to 5-00 P.M. | Session of General Assembly. |
| *Tuesday, October 14.* | |
| 9-00 A.M. to 7-00 P.M. | Excursion for Delegates and Ladies. This Excursion will be by Bus to visit Peloponesus, Eleusis, Megara, Corinth and Epidaurus. |
| *Wednesday, October 15* | |
| 10-00 A.M. ... ... | Session of General Assembly. |
| 12-00 noon ... ... | Lunch. |
| 2-30 P.M. to 5-30 P.M. | Scientific Session. |
| *Thursday, October 16* | |
| 10-00 A.M. ... ... | Session of General Assembly. |
| 12-00 noon ... ... | Lunch. |
| 2-00 P.M. to 5-00 P.M. | Closing Session of General Assembly. |
| *Friday, October 17* | |
| 10-00 A.M. ... ... | Third Annual Meeting of Medical Editors of the world. |
| 12-30 noon ... ... | Luncheon for Medical Editors at Hotel King George, tendered by Nepera Chemical Company, New York, U.S.A. |
| 3-00 P.M. to 5-00 P.M. | Medical Editors' Meeting. Round Table Discussion. |

Besides the actually scheduled events listed above, tentative plans are being made for the following events:

Reception by King at National Gardens. Performance of ancient Greek Tragedy at Hervdes Atticus Theatre near the Acropolis. Individual Sightseeing Tours. Visits to Hospitals in Athens.

An Exhibit will be open to the participants of the 6th General Assembly. This exhibit will be held at Zappeion in National Garden and will display:

The Findings of Hippocrates.
Amateur painting and sculpture by Greek physicians
Medical equipment and drugs.

PROPOSED PROGRAMME FOR THIRD ANNUAL MEETING OF MEDICAL EDITORS OF THE WORLD

*Chairman*: DR. OTTO LEUCH (Switzerland).
*Secretary*: DR. MORRIS FISHBEIN (U.S.A.).

I. POLITICAL EDITORIALS IN MEDICAL JOURNALS.
By Dr. Morris Fishbein, Editor of *World Medical Association Bulletin.*

II. CONTROL OF ADVERTISING IN MEDICAL PUBLICATIONS.
By Dr. Gunnar Gundersen.

III. THE EXTENSION OF MEDICAL INFORMATION THROUGH ABSTRACT SERVICES.
By Dr. A. Plichet, Editor of *Presse Medicale.*

IV. MEDICAL PUBLICATIONS IN LATIN AMERICA.
By Dr. J. A. Bustamante, Editor of *Archivos de Neurologia y Psiquiatria.*

V. PRACTICAL MATTERS OF MEDICAL PUBLICATIONS.
Round Table Discussion.

# CURRENT MEDICAL LITERATURE

## Tumors of the Medulla Oblongata

Cooper and Others (*Arch. Neurol. & Psychiat.*, **67**: 269, 1952) report on the clinical signs and symptoms and the pathologic findings in 15 patients with primary tumour of the medulla oblongata. The protean nature of the clinical manifestations of tumours of the medula is emphasized.

Of the 15 neoplasms, 7 were astrocytomas (Grade 1); 2 astrocytomas (Grades 3 and 4; glioblastomas multiforme); 1 ependymoma (Grade 2); 1 oligodendroglioma, and 4 hemangioendotheliomas.

The most frequent symptoms of these patients were ataxia, muscular weakness, diplopia, headache (usually cervico-occipital), and vomiting. Diplopia, ataxia, and headache were the most frequent early symptoms. The neurologic signs most frequently encountered were those of the pyramidal and extrapyramidal tracts, ataxia, nystagmus, inco-ordination of the upper extremities, and signs of involvement of the cranial nerves. Nine of the 15 patients presented bilateral signs. Six had evidence of increased intracranial pressure.

The most outstanding feature in the cases of tumor of the medulla oblongata is the extreme variability of the symptoms and signs presented by individual patients. It seems somewhat paradoxical that tumors affecting this small segment of the brain stem should produce such widely varying clinical pictures.

Another incongruous feature of many of these cases is the tremendous size of the tumor revealed at necropsy, in contrast with the relative paucity of neurologic signs demonstrated.

One other outstanding feature of these cases is the frequency of sudden, unexpected death from acute respiratory failure.

## Chloramphenicol in Treatment of Cutaneous Anthrax

Clarke (*Brit. M. J.*, **1**: 86, 1952) writes that cutaneous anthrax in four patients aged from 10 months to 55 years was treated with chloramphenicol with an initial dose of 60 mgm. per kg. of body weight and a maintenance dose of 30 mgm./kg. eight-hourly for 60 hours, then 15 mgm./kg. eight-hourly for 48 hours, and finally 7·5 mgm./kg. eight-hourly for a further 48 hours. All four cases showed rapid improvement leading to cure.

One case was treated on the usual lines with penicillin sulphadiazine, and arsenic as a control. The series is too small to demonstrate the superiority of either method, each appearing equally effective.

## Recurrent Thrombophlebitis

Schneider and Zangari (*Am. J. M. Sc.*, **222**: 562, 1952) give in the following lines the summary of their observations:

Six unselected patients with recurrent thrombophlebitis were investigated to determine the relationship of emotions and life situations to changes in the clotting time and relative viscosity of the blood.

Attacks of thrombophlebitis in the past were often temporarily correlated with sustained periods of emotional disturbance characterized by fear, anxiety, and anger.

Characteristically the stressful life setting in which thrombophlebitis occurred was one in which the patient was confronted by the threatened or actual loss of an important life figure. The patients with recurrent thrombophlebitis chronically reacted to the major and minor stresses of daily living with anxiety, fear, and anger, and these reactions were commonly accompanied by a shortened clotting time.

Patients with recurrent thrombophlebitis reacted to stressful interviews with striking shortening of the clotting time and moderate increase in blood viscosity. Non-stressful interviews failed to elicit such a response.

Healthy subjects and patients suffering from stress disorders other than thrombophlebitis failed to exhibit chronically shortened clotting times and did not react to stressful interviews with shortening of the clotting time or increase in blood viscosity.

Hypertensive patients reacted to stress interviews with a moderate shortening of clotting time and a marked increase in blood viscosity when a pressor response occurred.

Biologically, patients with recurrent phlebitis appear to have adapted a defense response which for the organism is desirable in preventing blood loss, but because of the intensity and prolonged use in these patients, often inappropriately, it may prove dangerous and even lethal for them.

## Fibrositis vs. Appendicitis

Ginang (*J. Phillipine M. A.*, **27**: 739, 1951) presents 3 case reports to emphasize the fact that pain and tenderness in the right lower quadrant are not always due to appendicitis and to stress the importance of considering the possibility of fibrositis of the anterior abdominal wall before committing onself to a diagnosis of appendicitis. Differentiation between intra-abdominal and intra-muscular lesions is made possible, not only by carefully evaluating the history, but also by applying the tests mentioned below and evaluating the results obtained thereof:

(1) Cutaneous hyperæsthesia to be elicited by Ligat's method (picking up, not pinching, between the finger and thumb a small fold of the skin in each of the four quadrants of the abdomen and noting which quadrant has increased sensibility to pain).

(2) Presence of tenderness, not only on the right iliac fossa, but also in other parts of the abdominal wall.

(3) Absence of rigidity in any part of the abdomen.

(4) When the muscular fold over the right iliac fossa was caught and rolled between the thumb and fingers there is tenderness and reflex spasm of the adjacent muscles which wore away when the muscular fold was pressed continuously for sometime.

(5) When the muscular fold containing the tender spots are lifted while finger pressure beneath the fold but over the appendix is applied no tenderness is elicited.

## Imbibition of Fluid as a Cause of Herniation of the Nucleus Pulposus

Charnley (*Lancet*, **1**: 124, 1952) writes:

It has been generally accepted that the nucleus pulposus contains a chemical substance of the nature of a mucopolypeptide having hydrophilic properties. It is now postulated that, under certain conditions the disc may acquire an abnormal amount of fluid and thereby achieve an abnormally high internal pressure, and that this sudden attack of hypertension inside the the disc may then constitute an attack of acute lumbago. The conditions which could precipitate this episode of hypertension might be many and varied and,

though unlikely, could even be infective as, for instance, after exposure to wet and cold. Once the pressure has risen inside the disc, a spontaneous protrusion may start, and thereafter some slight injury may finally complete the bursting of the annulus; the appearance of an external protrusion impinging on a nerve-root will then convert the picture from one of lumbago to one of sciatica. If this hypothesis should prove correct it opens up the future possibility of prophylactic treatment of lumbago by medical means.

### Nutritional Problems of Patients with Burns

Levenson and Evans (*Nutritional Rev.*, **9**: 251, 1951) write that World War II taught that deep burns, especially of the "wet" necrosis variety, may lead to marked nutritional disturbances. Even if the burned area is very extensive, healing can take place if the patient is maintained in good nutrition and if infection is controlled. The frequent onset of sudden malnutrition brings about serious complications—poor granulations and failure of skin grafts to take. Much remains to be understood about the faulty metabolism in burned patients, *e.g.*, no data are available on the metabolic rate of specific tissues in these cases. Significant protein depletion follows thermal burns, and water and electrolyte changes occur. Serum sodium and chloride are reduced and a negative potassium balance of 2 to 5 gm. daily for the first 3 days has been recognized and can be overcome by oral potassium. Gluconeogenesis is increased. There is deficiency in ascorbic acid and in some of the B-complex factors. In severe burns, liver function is depressed. In treatment, high dietary intake is urgent. The treatment of shock with transfusions goes without saying. Nutritional demands should, if possible, be supplied by the mouth, and 50 per cent over-feeding should be begun as soon as possible The use of various hormones including A.C.T.H. and Cortisone are under intensive investigation at present.

In radiation injuries little is known about nutritional treatment but persons in good states of nutrition withstand the injuries better.

### Ascorbic Acid in Burns

Klasson (*N. Y. State J. Med.*, **51**: 2388, 1951, Ref. *Practitioner*, **168**: 96, 1952) reports on the use of ascorbic acid orally and parenterally in 62 cases of burns. In those cases in which treatment for shock was not necessary the burned area was immediately cleansed with sterile water and gauze, or ether soap, if greasy, and a 1 per cent solution of ascorbic acid in normal saline or distilled water applied. No debridement, apart from removal of any foreign bodies, was carried out. Application of the solution was normally continued for forty-eight to seventy-two hours, during which time the area was kept constantly moist; treatment was then continued with a 2 per cent ascorbic acid ointment in water-soluble base. In some cases the ointment was used alone. In addition, all patients received ascorbic acid orally or parenterally, in dosage of 300 to 2,000 mgm. daily, in divided doses (children 300 to 900 mgm.; adults 500 to 2,000 mgm.). Advantages of the treatment were: (1) almost immediate alleviation of pain; (2) urinary output kept at almost normal levels; (3) minimum local œdema; (4) healthy granulation and reduced interval before skin-grafting could be undertaken; (5) little need for antibiotic therapy. Antibiotic therapy was employed in severe cases only; when marked sloughing was present a 0·5 to 1 per cent acetic acid solution or a solution of penicillin in normal saline, 1,000 units of penicillin per ml., was used daily in conjunction with the ascorbic acid ointment dressings. Commenting on the results the author writes: "……ascrobic acid can play a powerful role in the treatment of burns. In minor burns it is adequate in alleviating pain and hastens the healing period. In the severely burned it aids in combating the accumulation of the toxic protein metabolites. It lessens the need for extensive supportive therapy; however, it does not eliminate such immediate supportive therapy as adequate fluid needs of the body……"

### Tonsil Problem in Children

Berg (*Nord. Med.*, **37**: 633, 1948, Ref. *Am. J. Dis. Child.*, **83**: 375, 1952) writes:

A follow-up study was made on the state of health of 1,717 children on whom tonsillectomy had been performed during a 10-year period. In non-allergic children with recurring tonsillitis the effect of the operation had been very good, most of them being rid of their troubles. Considerable improvement was also found in children with frequent chills accompanied by cough and sneezing. The improvement applies to the first few years; the later results were less satisfactory. In the allergic children the results were not satisfactory; a great many of them did not show any improvement at all. In children with recurring otitis there had been obvious benefit from the operation, but adenotomy would probably have been just as useful. The relation between the tonsils and some of the common epidemic diseases was investigated, and it was found that scarlet fever incidence is markedly reduced in children who have had their tonsils removed as compared with children who still have their tonsils. In other specific infections there was no such effect.

### Penicillin in Occult Mastoiditis with Acute Digestive Disturbance

Weisse (*Ztschr, Kinderh.*, **66**: 121, 1948, Ref. (*Am. J. Dis. Child.*, **83**: 375, 1952) writes that occult mastoiditis following acute infections in infants and characterized by rapid loss of weight, vomiting and diarrhœa, and toxic appearance of the child was commonly treated by operation. The author treated eight patients with these symptoms and the clinical diagnosis of mastoiditis with penicillin and effected a rapid recovery of the patients. The author bases the diagnosis on the above symptoms and her clinical experience with 46 previously reported cases (*Ztschr. Kinderh.* **65**: 4, 1948) in which either surgery or autopsy confirmed the diagnosis of mastoiditis in 41 of the cases.

### Chloromycetin in Whooping Cough

Khalil and Abdin (*J. Roy. Egyptian M. A.*, **34**: 735, 1951) write that of the nine cases who were in the *catarrhal stage*, the cough ceased altogether in two cases in four days time; 3 cases, weeks; 3 cases, in spite of taking the drug, did develop a rather typical, though mild, spasmodic cough which continued for 4-6 days, then the elements of the paroxysms became separated, and they went on with a mild bronchitis-like cough for 1-2 weeks. The 9th case was affected least as she developel a rather severe spasmodic cough which lasted for seventeen days. This case happened to have a rather severe diarrhœa for over a week at the commencement of the therapy and this might be the factor responsible for the apparent failure of the drug.

Of the sixteen cases who were in the *earlier part of the paroxysmal stage* (1-10 days), 15 showed good improvement by

the 4th day. The improvement included the frequency, the duration, and the severity of the paroxysms. The paroxysms were broken up by the end of one week, so that the whole spasmodic stage lasted from 9 to 17 days. They continued with a mild bronchitis-like cough for another 1-2 weeks. The sixteenth case, although showing from the 4th day improvement in the severity and frequency of the paroxysms as well as cessation of the whoops, he did continue with a rather severe spasmodic cough for over 2 weeks. This case was receiving a big dosage of 80 mg/kg body-weight/24 hours but only for a short period (5 days).

Of the 15 cases who were advanced in the paroxysmal stage, 10 seemed to respond favourably to the drug: hæmoptysis, if present, stopped on the 2nd or 3rd day of the therapy, vomiting ceased in about 5 days, whoops also diminished remarkably in less than a week, and in about 10 days severity and frequency of paroxysms had diminished remarkably, or paroxysms had disappeared altogether. A case of pertussis encephalitis, who was drowsy, and had several convulsions during the day as well as severe bilateral pneumonia and high fever, also seemed to respond well; mentality cleared up and chest was free in less than a week; convulsions and severity of paroxysms, though remarkably diminished, yet continued for over a fortnight.

The other 5 cases, although they showed some improvement, continued with rather severe paroxysmal cough for a month or more.

Chloromycetin is valuable in the treatment of whooping-cough in its early stages. It has apparently succeeded in averting the disease or transforming an intractable and prolonged disease into a non-distressing rather insignificant ailment. Later in the disease it is apparently of some value in many but not in all the cases.

### Specific Treatment of Tuberculosis

Lincoln and Wilking (*Am. J. Dis. Child.*, **82**H 655, 1951) write that the use of streptomycin is mandatory in tuberculous meningitis, miliary tuberculosis, protracted forms of hæmatogenous tuberculosis with cavitation and bronchogenic spread, and progressive advanced chronic pulmonary tuberculosis. In meningitis it should be administered by both intrathecal and intramuscular routes in order to secure best results. A constant search for new methods of treatment must be made in order to improve the survival rate of meningitis still further. Intrathecal tuberculin seems to offer some help in this direction.

Streptomycin may be used as an elective measure in various nonfatal complications of tuberculosis, but its use should always be weighed carefully in each case in relation to expected response of the complication to other forms of treatment and to the possible future needs of the patient for streptomycin for other forms of tuberculosis.

The use of streptomycin should be considered contraindicated in uncomplicated asymptomatic primary tuberculosis regardless of the age of the child or size of the primary complex, because it has not been shown to effect rapid cure of the primary form or to prevent complications and also because of the danger of the emergency of tubercle bacilli resistant to streptomycin, thus preventing effective use of the drug in the event of a serious complication.

Streptomycin should always be used in combined therapy if treatment is continued for more than three weeks.

### Criteria for Sanatorium Care of Children With Tuberculosis

Lichtenstein and Bettag (*Am. J. Dis. Child.*, **83**: 292, 1952) give below the criteria for sanatorium care of children with tuberculosis:

A. The following types of cases definitely require sanatorium care:

1. Miliary tuberculosis. 2. Tuberculous meningitis. 3. The adult type (destructive type) of tuberculosis. X-rays should usually reveal evidence of cavitation. Tubercle bacilli should be demonstrated by positive sputum, stomach wash culture, bronchoscopic aspirate culture of guinea pig inoculation. 4. Progressive primary tuberculosis with tubercle bacilli demonstrated as above. In order to be classified as a progressive primary lesion there should be x-ray evidence of parenchymal inflammatory disease which has failed to resolve after several months of observation.

B. The following types of cases do not require sanatorium care:

1. Primary tuberculosis as indicated by a positive Mantoux test with evidence of enlarged glands in the mediastinum or elsewhere, but without parenchymal disease. 2. Primary tuberculosis as evidenced by a positive Mantoux test, plus a parenchymal pulmonary lesion of less than four months' duration.

C. Exceptional cases: Cases that do not fall definitely within one of the above classifications may be considered on their individual merits.

### Insects and Allergic Problems

Bowen (*Southern M. J.*, **44**: 836, 1951, Ref: *J.A.M.A.*, **147**: 1602, 1951) after citing a death in a boy bitten by ants, says that the literature describes more than 30 varieties of insects that may cause allergic disease. He lists 25 such species and shows that insects may produce sensitization by scales or dust from wings or body, injection of venom through the sting and the instillation of salivary secretions. In some persons the effect of sensitization is due not to the direct action of the irritant but to an acquired specific sensitization. Some children show a true Arthus phenomenon after being bitten by a mosquito. There is a higher incidence of insect dermatoses in children than among adults. Some persons develop a season's immunity in about 10 days, but react again, although less violently, the following season. This explains why visitors to the West Coast will experience unpleasant bites from fleas, yet the natives apparently are not disturbed. Papular urticaria (lichen urticatus) is especially frequent in infants and children, and occurs particularly during the warmer months. Many children with this disorder have been subjected to skin tests and food restrictions to no avail. A history of similar lesions the preceding year is frequently obtained and is suggestive of allergy to insects. The author believes that allergy to mosquitoes and chiggers is an important cause of papular urticaria, in that of 27 patients 24 reacted to mosquitoes and 3 to chiggers. Secondary infection is frequent and scabies must be ruled out, possibly by the use of benzyl benzoate. Some of these children have a dog, and fleas and bed bugs are possible cause of their skin lesion. When skin tests are made for the detection of insect allergy, they should be read in the second 24 hour period, as the immediate reaction may be negative. Moths and caterpillars may produce severe urticaria occasionally with fatal outcome. Stings from bees

and wasps are also sometimes fatal. Aphids and fleas are mentioned as possible cause of allergic reactions. Dichlorodiphenyltrichloroethane (D.D.T.) and insect repellents are of value in the prevention of insect bites. Epinephrine and histamine antagonists are helpful in severe reactions after insect bites.

### Allergic Dermal-Respiratory Syndrome

Ratner and others (*Am. J. Dis. Child.*, **82**: 666, 1951) write:

The allergic dermal-respiratory syndrome may be defined as a symptom complex in which both dermal and respiratory manifestations of allergy occur in the same patient, either synchronously or at different periods.

Thirty-five per cent of allergic children, or every third allergic child, falls into this category, which gives evidence of the significance of this syndrome in childhood allergy.

Fifty-nine per cent, or approximately every second child, with allergic eczema or with a history of eczema later has respiratory allergy.

Among the dermal-respiratory cases, a greater number present eczema in association with asthma than with hay fever.

The generally accepted view that eczema in childhood almost always has its onset in infancy, chiefly during the first year, is confirmed.

The present findings of the authors with respect to the age of onset for asthma reaffirms their previous observation that if asthma is to appear during childhood, it has nearly always made its appearance by the eighth year, and in the majority of cases asthma appears by 4 years of age.

Hay fever usually dates its onset before the seventh year.

The various phases of the dermal-respiratory syndrome follow a similar age of onset pattern.

Three stages in the evolution of this syndrome are described: Stage I: dermal manifestations, absence of respiratory symptoms, negative skin reaction to inhalants, present chiefly in infants; Stage IIA: dermal mainfestations, no respiratory symptoms, positive skin reaction to inhalants; Stage IIB: dermal and respiratory manifastations, negative skin reactions to inhalants; Stage III: dermal and respiratory symptoms, positive skin reaction to inhalants, occurs almost entirely in older children.

Eczema in infancy and childhood should not be regarded solely as a dermatologic condition. Every case of dermal allergy should be viewed as a potential case of asthma or hay fever. The need for adequate and appropriate treatment for inhalant sensitivity is stressed.

### Congenital Heart Disease Following Maternal Rubella

Gibson and Lewis (*Am. J. Child. Dis.*, **83**: 317, 1952) write that in 1,633 cases of congenital heart disease a history of maternal rubella was obtained in 17 instances, approximately 1 per cent.

Of these 17 patients, 14 were believed to have a patent ductus arteriosus, and the diagnosis was confirmed by operation in 10.

Of the 10 patients studied at operation, an additional cardiac defect was encountered in four.

Only one of the 17 patients fell into the cyanotic group.

### Significance of Convulsions in Children with Purulent Meningitis

Ounsted (*Lancet*, **1**: 1245, 1951) reports on 90 consecutive cases of purulent meningitis in children in which he found that there is a close association between the occurrence of fits and the outcome of the disease. The chief causative organisms were Meningococcus, Hemphilus influenzae, Pneumococcus and a hemolytic Streptococcus type B. All the children were given adequate chemotherapy, but 18 died or were left with gross cerebral damage, a failure rate of 20 per cent. Thirty-seven children (41 per cent) had fits in the course of their illness. In this group of children with fits the failure rate was 43 per cent, whereas in the group who were free from fits the failure rate was 4 per cent. The failure rate was also higher for those children who had multiple fits than for those with a single convulsion. The younger the child, the greater was the tendency for seizures to develop, Seizures that occurred after the institution of hospital treatment were more ominous than those limited to the early days of the disease. Phenobarbital was tried prophylactically, and the rate of cure was decidedly higher in this group, with a corresponding decrease in the number of seizures. Of eight patients in whom status epilepticus developed, seven died. The author found intramuscular administration of amobarbital sodium to be of great help in controlling the patients with seizures.

The author concludes that when convulsions are prevented or do not occur, recovery follows in 96 per cent of cases and that routine prophylaxis with phenobarbital is safe and may lead to a reduction in the mortality.

# CURRENT TOPICS

## ALL-INDIA PHARMACEUTICAL CONFERENCE

Dr. B. N. Ghosh in course of his presidential address at the 12th Session of the All-India Pharmaceutical Conference said:

India has been generally an importing country in the matter of her drug supply. During the first World War in 1914-18 its dependence on foreign drugs was evident and systematic and serious efforts were made for the first time to improve pharmaceutical industry in India. To cater for the needs of the defence services the Medical Stores Depots were organised and efforts made to manufacture in India some of the preparations chiefly sera and vaccines. At the end of the war interest in Indian production waned and drug import from foreign countries again began to flourish, so that during the years 1919-26 the Indian market was flooded with drugs of any quality. It naturally had its repercussions on medical practice in India and it was from this quarter that protests were made which ultimately created a strong public opinion. Attention of the Government was drawn to this menace to public health and as a result of the efforts of legislators like the late Sir Henry Gidney and Sir Haroon Jafar and from evidence collected from independent sources, the Government of India in 1930 appointed the Drugs Enquiry Committee under the Chairmanship of Col. R. N. Chopra. This Committee after a careful and thorough investigation recommended (1) a comprehensive all-India legislation for the control of drugs and the profession of pharmacy; (2) machinery for checking, inspection and testing of drugs to ensure uniformity

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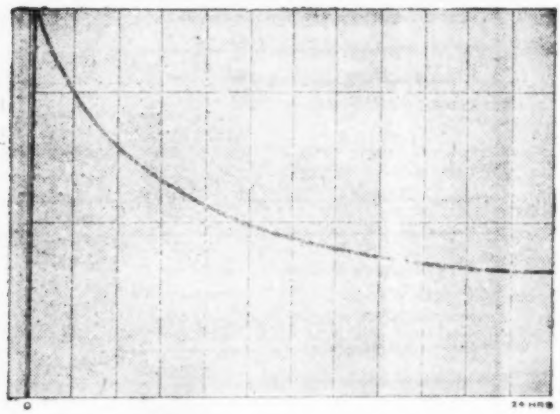

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and proper standard of purity and strength for which purpose establishment of a well equipped Central Drugs Laboratory and Provincial Drugs Control Laboratories working under the guidance of and close relation with the Central Drugs Laboratory ; and (3) setting up of a Central Pharmacy Council and Provincial Pharmacy Councils for the training of the phamaceutical personnel to give effect to control work as envisaged in the Drugs Act.

### Drugs Enquiry Committee and Pharmacy Act

The report of the Drugs Enquiry Committee (1930-31) gave a rather sad picture of the status of the profession of Pharmacy as existed then. The so-called "compounders" of India in relation to the pharmacists of Great Britain and other Western countries show a marked contrast in training, status, etc. It was, therefore, considered necessary that the Drugs and Pharmacy Act should be passed not only for the improvement of the training of the pharmacists for drug control work but also in the building up of India's ancillary health personnel.

One of the few legislative measures placed before the Assembly, soon after India attained independence, was the Pharmacy Bill of 1948 which became an Act in the same year. As a result of the Pharmacy Act, the Central Pharmacy Council has been formed and it is now functioning. This Council has also provided a comprehensive All-India Regulation for the minimum standard of education for the diploma course and for the registration of Pharmacists. Further, the Central Government has directed the different States to constitute as soon as possible Provincial Pharmacy Councils. The different States have already appointed Pharmacy Registration Tribunals and as soon as the first register will be ready the State Pharmacy Councils will be constituted, which, it is hoped, will be able to discharge their responsibilities to the nation in as capable a manner as it is expected of their compatriots in Western countries.

### Pharmaceutical Education

It is a matter of disappointment that though Bengal was pioneer in drug and pharmacy movement and thought about the improvement of the status and training of the pharmacists much earlier than any other province, it is lagging behind almost all provinces in the matter of pharmaceutical education. In the earlier years, the training of so-called compounders was undertaken in different institutions in Bengal, for instance, at the Compbell Medical School, Dacca Medical School, Burdwan Medical School and the Bengal Medical Institute. These students were trained for the diploma course under the State Medical Faculty of Bengal. Subsequently, the curriculum has been changed and while all the institutions which trained the diploma holders have been abolished, there is only one institution, *i.e.* Jalpaiguri Medical School where pharmacy training is now being held. According to the Bhore Committee Report (1946) the ratio of qualified pharmacists in India is 1 to 4,000,000 of population as against 1 to 2 doctors in the United Kingdom. There is a big gap which has to be bridged. That there should be at least two more institutions—one in Calcutta and the other either at Midnapore or Bankura, for the training of diploma course in pharmacy no one will question, since the Jalpaiguri Institute can only cater for about 50 students. Apart from the diploma course, it is necessary that the Government of West Bengal should start a College of pharmacy with a degree course under the University of Calcutta. The degree course in pharmacy has already been started in a large number of institutions outside Bengal. The Banaras Hindu University had been a pioneer in this direction, and within recent years Universities of Andhra, Bombay, Ahmedabad, Madras, Agra, established a degree course and more recently a College of Pharmacy has been established at Pillani (Rajputana).

### Pharmaceutical Industry

The last war made both the profession and the public to realise how India was dependent on foreign countries for her drug supplies, and it is a matter of disappointment that while efforts for the development of different industries are being planned and schemes formulated on a higher level, little attention is paid to the development of drug industry in India, which is so intimately associated with the general health and welfare of the nation. The pharmaceutical industry, to my mind, should be classed as one of the most vital industries and should demand special attention of the Government.

Recently, the medical profession has been experiencing great difficulty in procuring not only certain essential drugs like, penicillin, streptomycin, sulpha drugs, etc., but also many proprietary and other preparations for daily use which are imported from abroad. Even drugs like santonine and apomorphine are not always available. If the supply is continuous and uninterrupted all the year round, the question of hoarding and black-marketing will not arise. Such, however, is not the case. Those who have the welfare of the country at heart should see that not only the supply of essential drugs, invalid foods, etc., and other basic materials is uninterrupted, but every help should be given to the indigenous manufacturers to enable them to produce drugs and preparations of all varieties. Since however licenses are issued erratically the possibility of shortage of supply is anticipated and the essential drugs go underground. This is happening even to-day.

Another serious menace which threatens the health of the people is the increase of the production of spurious drugs and also how drugs like penicillin, streptomycin, etc., so valuable to the life of the patient, are being misbranded, and this is happening inspite of the implementation of the Drugs Act.

It is also essential that the manufactured products should be of proper standard and quality so that the profession may with confidence use them in the absence of, or in preference to, imported products. However much we may like to help the local manufacturers and wish them to prosper, we cannot overlook the fact that both the profession and public do not hesitate to use foreign preparations even at a higher price. Evidently some of the manufacturers in this country have not been able to create that amount of confidence by maintaining proper standard and quality of their preparations or perhaps the manufactured articles are not of the type the physicians want.

### Impediments to Growth of Indigenous Drug Industry

There are however many obstacles which have to be overcome before we can expect the drug industry to flourish. Some of the difficulties are :—

1. Want of an organisation for the collection of pure and reliable vegetable drugs with arrangements for drying, curing and storing.

2. Existence of provincial excise barriers with the result that inter-provincial movement of spirituous preparations is beset with difficulties.

3. The heavy cost of transport increasing the price of raw materials growing in different parts.

4. Absence of a chemical engineering department to undertake designing and equipping commercial plants for the manufacture of drugs on a large scale.

If it is policy of the Government to encourage indigenous drug industry, the present system of issuing license for import of essential raw materials or machinery wherewith to manufacture different compounds for every day use should be replaced by a more simple and less complicated procedure. Every facility and encouragement should be given to the local manufacturers so that apart from the drugs and different pharmaceutical preparations, which are at present manufactured in this country, India may be made self-supporting with regard to most of her requirements in drugs and chemicals generally used by the profession. On the other hand the manufacturers should realise that the profession and the public will not be satisfied unless the quality and standard of their products are brought up to the international level.

Since the whole structure of drug industry in India depends upon the supply of different raw materials and basic chemicals, it is evident that there will be a total breakdown if perchance the supply is cut off as may happen if there is shortage of shipping space and difficulty of transport in case another war breaks out sooner or later. It is therefore essential that every effort should be made to prepare most of the basic chemicals and pool all our resources to develop indigenous drug industry.

### Drug Resources of India

In these days of antibiotics and synthetic compounds we often overlook the potentialities which India offers of her natural resources. However much we may have benefited from the introduction of newer remedies, which undoubtedly have revolutionized modern traetment of many incurable diseases, one cannot overlook the fact that we have not been able to replace drugs like opium, quinine, ergot, digitalis, etc.

It must be admitted that India possesses quite a large number of vegetable drugs of reputed value which have not yet been sufficiently investigated to place them on more scientific basis. Most of the vegetable drugs which are included in the British or United States Pharmacopœias grow in India or may be made to grow by proper cultivation. Medicinal plant cultivation therefore should be done on a properly organised basis and commensurate with the needs of the country. Take for instance cinchona cultivation which was introduced in India earlier than in Java yet India depends upon imports of quinine from foreign countries without developing her own cinchona to meet her own requirements. Medicinal plant cultivation as an aid to drug industry should be taken up in collaboration with the "Miscellaneous Crops" Committee. Many drugs which grow in this country can easily replace or supplement imported drugs provided their standards are worked out and fixed. The field is so vast that a careful survey regarding the actual requirements, possibilities of development and research should be made and for this purpose co-operation between pharmacists, pharmacologists, chemists and drug manufacturers is necessary.

It is, therefore, desirable that the drug manufacturers should direct their energies on a new direction so that they will be able to forestall foreign competitors who have better organisation, equipment and arrangements for research. It would be a news to you that many Swiss and American manufacturers are taking great interest in the study of our indigenous plant products. Very recently the Commerce Department of U.S.A. were enquiring about *Scoparium dulcis* which grows in Bengal and which is supposed to be of some value in diabetes. While we are disinterested on-lookers in our own resources, foreign manufacturers are trying to develop on a scientific line the possibilities of our indigenous drugs.

### Drug Research

Another matter to which I drew attention on many occasions is that the manufacturers should encourage drug research to which so far very little attention has been paid by them, although a lead in this direction has been given by the Bengal Immunity Company of Calcutta and Ciplas in Bombay by establishing research institutes. The drug manufacturers are making profit from the results of research on medicinal plants undertaken by different research workers and it passes my imagination why they should not help drug research. Since it may not be possible for every individual firm to start research laboratories, they should combine together and start a well-organised research institute with an attached hospital for therapeutic trials instead of blaming the Government for not giving them facilities for the purpose. I would appeal to the different manufacturers to give this question their serious attention and I am sure that with the co-operation of the clinicians, pharmacologists, pharmacists and biochemists, and provided the necessary financial help is forthcoming, much can be done in this direction. The Chemical Manufacturers Association, which is a powerful body, should take the initiative in this direction.

India possesses ample resources which have not been properly explored and which require proper investigation on modern lines. It is through active collaboration in therapeutic research and through a generous support of research programme that the drug manufacturers in India can prove to the medical profession their high ideals of scientific progress, which I am sure, will secure confidence of the profession and enlist their support. Signs are not wanting that the manufacturers are changing their outlook and directing their energies to a better and well-planned future.

## THE LOST ART OF DIAGNOSING WITH THE EYES AND EARS

Walter C. Alvarez, M.D., writes in *Illinois M. J.*, **100**: 197, 1951:

To-day I feel great need for pointing out that, although of late medicine has been advancing and developing wonderfully well along certain lines, along one line it has been going badly. There is too great a tendency, especially among young physicians, to rely mainly on the laboratory and the x-ray departments for the making of their diagnoses.

Thus, at the Mayo Clinic, where I studied this problem for 25 years I found that while most of the brilliant young doctors who came from our great universities knew more than I did about diagnosing rare diseases with the help of laboratory reports, often my older colleagues and I, with the help of only our eyes and ears, were able to make a diagnosis that was more pertinent than the one made in the laboratory.

Thus, while a young colleague was keenly studying a high blood cholesterol or a somewhat abnormal sugar tolerance curve, or some diverticula of the colon, he might be failing to look at the man keenly enough to see that he was ill only because he had a little stroke or an attack of encephalitis.

Most of the patients who are seen at a place like the Mayo Clinic have already been studied thoroughly elsewhere, and by able internists. Often, of course, the diagnosis the patient brings is correct, but when it is wrong or more often, inadequate to explain all the symptoms, one usually finds that the mistake made was due to the failure of the physicians to look shrewdly at the patient or to talk with him. In many a case, even one question would have shown that the diagnosis was inadequate, or it would have led to the making of a more pertinent one.

To illustrate what I mean: not infrequently I see a patient, sent with the diagnosis of a duodenal ulcer made by a roentgenologist. A Sippy treatment for ulcer did not help. If only the local physician had asked one question he would have seen that his diagnosis was wrong. If he had only asked the man, "When did you have hunger pain in the pit of your stomach, relieved by eating?" the fellow would have said "Oh, that was 20 years ago. I haven't had any of that trouble since!" Then the doctor would have known that what the roentgenologist saw was only a scar, and that the cause of the symptoms being complained of had yet to be found.

To show the extremes to which the modern lack of observation of patients can now go: the other day I saw an elderly man who complained of abdominal pain. Gastroenterologists had tried to relieve this, and had had his digestive tract roentgenographed several times, hoping to find an ulcer. When the man came in and I shook his hand I was immediately impressed by the fact that it was clumsy and clammy. It did not feel right. Looking down at it, I saw a shiny red hand, the skin of which, evidently, had suffered marked trophic changes. A few questions brought out the facts that the abdominal pain had come suddenly, with a bad dizzy spell. With this there had come the changes in the hand and an inability to concentrate on work. Obviously, the man had had a little stroke which had injured the centre for the hand and in some curious way had sent a storm down the vagus nerves to the stomach.

A while ago I saw another man like this who had been examined by several internists, all of whom had been concerned only with a slight increase in blood pressure, a left bundle branch block, which was not producing symptoms, and some disturbances in renal function. When I saw the fellow I was impressed by the fact that something must have hit his brain and hit it hard. He did not look like the sort of fellow who could be a prominent attorney, and that is what he said he had been. His answers to questions were slow, and his face was expressionless and uninterested. His eyes did not light up. He had a slight weakness and tremor of the muscles on the right side of his face. He had a little drooling of saliva at one corner of his mouth, and he had a little egg on his chin.

As I could not get much of a history out of him, I took his wife into the next room and asked her if her husband had changed. She said, "Yes, he is a very different man since he had that spell in October in which he fell down." I was much impressed by that fact that he could not work any more; he couldn't even read as he used to do. Obviously he had had a stroke.

One difficulty in university medical schools to-day is that most of the teachers are so highly interested in rare diseases that they are constantly showing cases of these diseases to the students. As a result, a student comes to know much about such rare diseases as Ayerza's syndrome, pheochromocytomas or potassium deficiency, but he doesn't know the commonly seen, frail little constitutionally inadequate type of woman the minute he sees her. He is not able to recognize common hysteria at a glance. He cannot recognize on sight a mildly psychotic patient, and often he doesn't even notice that a patient is walking in a curious way. He is not able to recognize the different gaits or postures which can be so helpful diagnostically.

I often say that so long as a psychotic patient does not punch his doctor in the jaw, he can go through the man's office or through a great diagnostic clinic and come out on the other side with the report that he is perfectly well. Many a time I have seen this happen. I remember the melancholiac, much depressed wife of a professor who came from a university hospital with a diagnosis of amœbiasis! The medical head of a big life insurance company once asked me to see one of his branch office heads, who, formerly, had been a very able and successful man. But for a year his office had been going downhill. His chief had sent the man to several internists but he had always come back with a clean bill of health. When I saw him I immediately recognized hypomania. The man was too talkative and pally and excitable. I went out to the waiting-room, found his wife and had a chat with her. She said "Yes, he is now in one of his excitable stages, but soon he will be down in the depths, crying and wringing his hands and talking of suicide." Evidently, here was a manic depressive man who should have been in an asylum, getting shock treatments, but when in a doctor's office he behaved so well that his hypomania was not noticed.

To-day one of the greatest difficulties with medicine is that often the consultant does not take the patient's history. He lets his nurse or an assistant do that. Then the patient is sent for a lot of tests and x-ray studies, and finally the Chief sees him or her for ten minutes. During this time the doctor just looks through the laboratory reports and accepts any diagnosis that appears to have been made for him. As I pointed out, he hardly looks at the man, and, of course, has no time in which to get acquainted with him. It probably never occurs to him, also, to talk to the family to see what the patient's psychic situation is.

A few times in my life, when, in a hurried day, I have tried to practise this type of what I call decerebrate medicine, I promptly got myself into serious trouble or nearly made a bad mistake. For instance, one day while hurrying so that I could leave on a train, I found a stout, nice-looking woman of 45 who, from the record, had given a typical story of a common duct stone. I was all set to refer her to a surgeon when I said to myself, "No, here I am, practising the type of medicine which I am always decrying." Accordingly, I started taking my own history. It had already been taken on several occasions by three young physicians who all agreed that after years of suffering "gallstone colics", the woman had been operated on and a gallbladder full of stones had been removed. Following this, she had gone on having the "colics." It was stated also, that once she had been jaundiced; sometimes she had had chills; and sometimes fever. Obviously, this was the typical story of a common duct stone.

But when I said to her, "How bad is your pain during a colic? Do you need morphine?" I was startled to hear her say, "Why, I have no pain; I never had a pain in my life." I asked then what she did have, and she said she had spells in which she vomited for a day or two. I asked, "Does the vomiting spell begin with a headache?" "Yes" she said, "over my right eye". In a minute I had the typical story of migraine, and of gallstones which had never given her any pain or distress. That is why their removal had had no effect on the syndrome. Her migrainous attacks came because she was married to a man twenty years older whom she did not much like. Why did the young doctors write "colic?" Doubtless because, knowing from x-ray work that she had gall stones, they assumed that her spells must be colics.

I asked her then, "How about the jaundice?" She said, "Oh, your assistant was so determined that at some time I must have had jaundice that I finally said that I had it in order to get rid of him!" The "chills" turned out to be a nervous chill which she had once after an argument with her husband; and the fever turned out to be an insignificant 99·5 on some days when she was nervous. How grateful I then was that I had not sent her in for a useless operation.

I am often greatly interested to see what nowadays able physicians do not notice. Thus, I was asked to see an elderly man whose feeling of great fatigue had appeared to be inexplicable, even after many examinations. On coming into the room I noticed that he was wearing big rubber winter galoshes. I asked him what he was doing with those on, on a hot day in July. "Oh, I'm so cold," he answered. The diagnosis then was obvious, and a test showed a basal metabolic rate of minus 38 per cent.

Another patient was referred to me by a distinguished professor of medicine for an "amœbic dysentery" which had not been relieved by much treatment with emetine and carbarsone. On shaking hands with the man, my assistant noticed a hand which felt feverish; and on looking into the man's eyes, he saw a rather frightened look of a person with exophthalmic goiter. Actually, the man had a basal metabolic rate of plus 65, and removal of most of his thyroid gland brought instant relief. In this case, if the professor had only asked the man one question he would have realized that he was not dealing with dysentery. I said to the man, "What do your bowel movements look like? Are they bloody, or mucous, or watery or mushy?" He said, "They consist of little, round, hard balls!" This so-called diarrhœa stopped the day the thyroid gland was removed.

It is unfortunate that to-day a tremendous amount of the laboratory and x-ray work which is done is wasted. For instance, as I was writing the notes for this talk, I was called to see a man who, because of abdominal discomfort, had had several x-ray studies made of the digestive tract. A glance at him showed that he was depressed and schizoid. On talking to his family, I found that for sometime he had been in a depression. He was a man forty years of age who had never married or showed any interest in girls. More questioning of the family showed that his aunt is in an insane asylum.

I said to the brother who was giving me the information, "Why didn't you tell your doctor all this before you left Virginia to come to Chicago?" He said, "I tried to tell him but he was so busy that eventually he got angry with me and told me not to bother him." Each time the brother got worse the doctors sent him for more x-ray studies.

In the clinic in which I used to work, the older members of the Staff each year used to cancel bills for around a quarter of a million dollars worth of laboratory and x-ray work which they felt had not been necessary and should not have been ordered by the assistants. For instance, one evening I saw a young woman who had been given orders for over two hundred dollars worth of laboratory work, when her only complaint was insomnia! Just one question showed that her finance had started going out with another girl. In another case an old man with a fixed tumor in his epigastrium and the story of a loss of 30 lbs. in weight had been given almost every conceivable test by the brilliant young graduate of a great university medical school. The patient brought with him an x-ray film showing an inoperable carcinoma of the stomach! When I asked the assistant why he had spent ten days studying the man with many tests his answer was that he had been trained to do that to every patient.

All of this can be summed up in one sentence. What we need in medicine to-day is more observation and more taking of histories and less ordering of useless tests. They are useless when the diagnosis can be made without them.

## NOTES AND NEWS

### I. C. M. R. FELLOWSHIPS

Applications are invited for research fellowships of the value of Rs. 250 p.m. each, tenable for two years, with a contingent grant of Rs. 500 per annum for each fellowship, to be awarded to medical graduates, possessing qualifications included in the Schedules of the Medical Council of India, and to persons holding a Master's Degree in Science of a recognised University or its equivalent for research in Medical and allied subjects to be carried out at Medical Colleges, Research Institutes, Laboratories, University Science Institutes, etc., where facilities for research are available. The fellowships will be awarded with effect from the 1st April, 1953. Full particulars and prescribed application forms can be obtained from the Secretary, Indian Council of Medical Research, Post Box No. 494, New Delhi. The last date for the receipt of applications is the 20th September, 1952.

### WORK FOR THE BLIND IN INDIA

The history of 50 years of work for the blind in India has been summarised in a publication brought out by the Minister of Education, Government of India, in commemoration of the centenary of the death of Louis Braille.

Organised work for the welfare of the blind is comparatively recent in this country. The first school for the blind was established at Amritsar in 1887 and moved subsequently to Dehra Dun. At present there are about 50 institutions for the blind in the country and about 1,500 blind children and adults are receiving education and vocational training in these institutions. In 1950, the Government of India took over the St. Dunstan's Hotel for war-blinded Indians, transforming it into a training centre for the adult blind. At present 125 blind adults from various parts of the country are undergoing training at the centre on which the Government of India are spending about Rs. 2,50,000 annually.

The inmates are being trained in a number of simple trades—weaving, cane work, knitting, paper bag making, poultry farming etc. In addition to free training the centre also provides free of cost board, lodging, clothing and other

amenities of life, one of the most difficult problems facing the blind being their absorption into ordinary industry.

During the last year the Government of India have established two schools for blind children; one at Ajmer and the other at Vandhya, Cutch. The school at Ajmer is to be developed as a model school for all Hindi-speaking centrally administered areas.

The institutions had no uniform code and towards the end of the last century about ten codes were being practised all over India. Since 1902 many attempts were made to evolve a uniform code. The U.N.E.S.C.O. International Braille Conference held in Paris in 1950 also declared it desirable to evolve a single Braille script for the world.

A central Braille printing press has been established at Dehra Dun which is the first press of its kind in this country and perhaps in South-East Asia. It has already brought out its first book in Hindi.

## ALL-INDIA PEDIATRIC CONFERENCE

The Third All-India Pediatric Conference will be held in the Medical College, Madras, on August 24-26, 1952.

His Excellency the Governor of Madras will inaugurate the Conference. All medical men interested in pediatrics are cordially invited to participate in the Conference.

Further informations may be had from the Secretary-General, Prof. S. T. Achar, Department of Pediatrics, General Hospital, Madras.

## CONFERENCE OF INTERNATIONAL PLANNED PARENTHOOD COMMITTEE IN INDIA

The third international conference of the International Planned Parenthood Committee will be held in Bombay, from November 24 to December 1, 1952. It is under the auspices of the Family Planning Association of India, Morarji Mansion, Darabsha Road, Bombay 26. Lady Rama Rau is chairman. A wide attendance is hoped for, particularly from the Asiatic countries. The International Convention on Child Welfare convenes in Bombay from December 5-12 and the International Conference of Social Work in Madras from December 15-21. Delegates may find it of interest to attend all these conferences.

## INTERNATIONAL FERTILITY ASSOCIATION

On October 18, 1951, in Rio de Janeiro, Brazil, delegates from twelve nations founded a new world medical society known as the International Fertility Association. The aims of this organization are:

(1) To study the problems of Fertility and Sterility in their broad implications. (2) To stimulate scientific investigation and social awareness in the field of Fertility and Sterility. (3) To standardize and orient nomenclature, terminology, tests and evaluation of diagnostic methods and therapy, throughout the world. (4) To hold international congresses in the specialty in different parts of the world. These congresses are to be regularly scheduled.

The First World Congress on Fertility and Sterility sponsored by the new society will be held in conjunction with the American Society for the Study of Sterility in New York City in May, 1953.

For further information, write to Dr. Carlos D. Guerrero, Secretary-General, Miguel E. Schulz No. 19, Mexico, D. F., or to Dr. Abner I. Weisman, Associate Secretary-General, 1160 Fifth Avenue, New York, N. Y.

## CONTROLLED TRIALS OF NEW ANTI-TUBERCULOSIS DRUG IN DELHI HOSPITAL

The first use ever to be made in S.-E. Asia of the new anti-tuberculosis drug isonicotinic-acid-hydrazide is in the course of "controlled trials" at present under way in Delhi on a limited number of patients of the Silver Jubilee Hospital and the New Delhi Tuberculosis Clinic. The Ministry of Health of the Government of India has appointed a committee to supervise the trials consisting of Dr. G. K. Sikand of the New Delhi T.B. Clinic, Dr. R. Krishna of the Silver Jubilee Hospital, and Dr. J. Fielding, WHO bacteriologist attached to the tuberculosis training and demonstration project set up at the New Delhi TB Clinic with assistance from WHO and UNICEF.

The present series of trials in Delhi will continue for three months, and patients will be kept under observation for six months before any conclusions are drawn.

The World Health Organisation is providing part of the supplies of the new drug for the trials which in the first instance are being directed to ascertaining the exact effect of the drug on people suffering from either acute or chronic tuberculosis of the lungs in typical form.

The new drug can be taken mouth, and is said to be much cheaper to produce than streptomycin. If the hopes concerning it prove to be justified, it will have several other advantages and will indeed be a powerful weapon in preventing the spread of tuberculosis as well as in its treatment—*WHO Press Release.*

## ORISSA COUNCIL OF MEDICAL REGISTRATION

The Orissa Council of Medical Registration at its meeting held on 15-1-52 discussed amongst other things the following important matters:

1. Proposal to levy renewal fees on the registered medical practitioners.

2. To safeguard the practice of registered medical practitioners choice of doctors by patients *or vice versa*. It was decided that the following qualifications were not considered sufficient for purposes of registration in the Medical Register.

(1) L.M.F. (East Pakistan) and (2) D.C.L.Sc. (Madras).

## SOCIETY FOR THE STUDY OF INDUSTRIAL MEDICINE

There was a General Body Meeting for the Madras State Branch of the Society on the 6th June at 7-45 P.M. Dr. V. N. C. Rao was proposed to the chair to conduct this meeting.

The Laws and Bylaws of the Madras State Branch were read by the Chairman, and were unanimously adopted. Office-bearers were elected for the session. Dr. V. N. C. Rao was elected the chairman and Dr. C. K. Ramachandra, the secretary.

It was generally agreed that a meeting be held about once a month and that every third meeting be held out of Madras.

## EXCLUSIVE HOSPITAL FOR WORKERS OF BOMBAY

Bombay city's seven-lakh industrial population is to have an exclusive hospital shortly at an estimated cost of Rs. 40 lakhs.

The 300-bed proposed hospital will be located in the heart of industrial Parel in north Bombay.

The hospital, to be called the Gandhi Memorial Hospital, will be the first hospital of its kind in India for the exclusive

use of industrial employees covered by the Employee's State Insurance Act. The funds required for the hospital will be released by the Mahatma Gandhi Memorial Fund Trust.

The hospital would have research facilities in industrial diseases and for training doctors and nurses. The Government of Bombay have already taken action to acquire a plot of 50,000 square yards in Parel to build the hospital. Meanwhile, preliminary arrangements have been completed for implementation of the Health Insurance Scheme in greater Bombay by January 1953. The benefits of this scheme will be extended to the industrial employees in Ahmedabad and other centres at a later stage.

### HEROIN TABOOED BY WHO EXPERT GROUP

To protect public health and safety an international pharmacologists group has recommended that diacetylmorphine (heroin) no longer be used for medical purposes, and should be replaced in all countries with other, less dangerous drugs.

The World Health Organisation's expert group on narcotics, which meets regularly to advise on problems connected with drug addiction, also examined the addictive properties of some 15 new synthetic substances, several of which are already on the market. The substances examined belong to the pethidine, methadone and morphinan types and are potent analgesics. Thirteen of these drugs should be brought under international control, the experts recommended. This, they said, should be done through machinery provided by the United Nations under various international conventions.

### U.S. PUBLIC HEALTH DIRECTOR IN INDIA

Dr. H. Van Zile Hyde, who is Medical Director of the U.S. Public Health and Sanitation of the Technical Co-operation Administration of the U.S.A., came to Delhi for discussions with the Government concerning projects for community development and health promotion in India for which international assistance is available. Dr. Hyde has extensive experience of international health work including a long-standing association with the work of the World Health Organisation. Since the earliest days of the organisation Dr. Hyde has been designated by his government as member of the WHO Executive Board.

In Dr. Hyde's opinion, the control of malaria and the improvement of environmental sanitation are two of India's major public health problems in which rapid progress is possible using well-known and well-tried public health methods.

In the field of sanitation, the provision of protected water supplies throughout the country would, Dr. Hyde was positive, be sufficient alone to lighten the great load of illness and unnecessary deaths from cholera, dysenteries, typhoid and other water-borne diseases, with consequent economic benefits. At the same time proper methods of the disposal of human wastes would quickly reduce the incidence of hookworm and other worm infestations.

"It is not economically possible for India to provide adequate medical care for its millions until the terrible toll of disease is brought down to manageable proportions through preventive measures carried out by efficient public services". Dr. Hyde asserted.

### DIRECTIONS OF HIGH COURTS REGARDING ATTENDANCE OF DOCTORS AS WITNESSES

"It has been represented to the Court that medical practitioners who are summoned to give evidence in subordinate courts are inconvenienced by the operation of the rules inasmuch as no time is fixed in summonses for taking their evidence and they have got to attend the courts from 10-A.M. to 5-30 P.M., as the case may be, till they are actually examined.

2. The Court considers that while it is not possible to fix with the exact precision a time for examination of a witness, an attempt should nevertheless be always made to accommodate a registered medical practitioner summoned to give evidence as far as practicable. I am, accordingly, to request that the summons issued to a registered medical practitioner, should state for his attendance the time when the court concerned expects to be in a position to examine him, and that his examination should take place at the time indicated in the summons or as soon thereafter as practicable so as to interfere as little as possible with his professional work.

(*Registrar, Calcutta High Court Circular dated*, 10-4-52).

* * * * * *

"I am directed to say that the Indian Medical Association, Uttar Pradesh State Branch has suggested that when a Medical Practitioner is summoned to give evidence in Court, the summons should indicate the specific hour at which he is likely to be examined. The Court, therefore, desires that a Medical Practitioner whether he be a private practitioner, or a Government servant, should not be summoned to appear at 10 A.M. on the date on which he is summoned as a matter of course, but should be summoned to attend at a time when the Court thinks it will be able to examine him. Every effort should be made to accommodate him and to take his evidence at the time indicated in the summons or as soon thereafter as practicable so as to interfere as little as possible with his professional work."

(*Registrar, Allahabad High Court Circular dated*, 7-8-51).

* * * * * *

"Medical Practitioners are classified under the Category of Expert Witnesses and as such the fee of Medical Practitioners is governed by Rule 2 of the Order XVI of the Code of Civil Procedure which, without prescribing any scale of fee, gives discretion to the Court to fix a reasonable remuneration for the time occupied both in giving evidence and performing any work of an expert character necessary for the case."

(*Registrar, Allahabad High Court Circular dated*, 10-1-52).

## CORRESPONDENCE

*The Editor is not responsible for any views expressed by contributors*

### A NEW PENAL PROCEDURE CONTEMPLATED IN U.P.

Sir,—A new convention is sought to be established in Uttar Pradesh which if adopted will make it compulsory for surgeons and anæsthetists to report to the police every case of fatal accident occurring in their practice. It is a matter of great importance not only to U.P. but the rest of the country; if allowed to take root it will extend to other states. Physicians and obstetricians will not remain immune, for fatal effects follow life saving emergency measures in their practice also.

We are already subject to two penal procedures; we can be sued in the ordinary courts of the land and we can be

brought before the Medical Council of the Pradesh concerned for unprofessional conduct. The friends and relations of the victims of the fatal accidents can claim a death certificate from the doctor so that there can be no question of concealing deaths from the authorities. As if all this was not enough, a new convention is contemplated which will compel the erring doctor to rush to the police station and surrender as a repentant criminal. It will be a lucrative source of black mail and corruption in our country whatever may have been the effects of this convention in advanced countries. It will bring the use of many modern life saving devices to an end as none of them promises cent per cent success and doctors will think o "safety first." With the increasing awareness of the public regarding their rights and privileges, members of the medical profession have been cautious of trying out remedies and measures of doubtful value, but the incentive of doing the best is still there and this will die out with the convention.

This matter should not be treated complacently. It should receive earnest consideration before the final step is taken. I am, etc.

Banaras, 30-6-52. S. K. CHAUDHURI.

## PASTEUR TREATMENT

Sir,—Captain T. P. Banerje has given a very interesting article in the Journal of April, 1952 on Pasteur treatment. There is no doubt, as he suggests, a great waste in the use of vaccine and far too many people, who do not require treatment, are given it. But, it is my opinion that it is the general lack of information, even among educated people, as to what to do when bitten by a stray or even a pet dog which is at the root of the trouble. The usual tendency is to destroy the dog at once. Very few people bother to send the brain for examination for Negri bodies and practically never for biological examination. Even if the brain is sent for microscopic examination, with a negative report, there is no guarantee that the dog was not rabid, particularly as in the early stages of the disease Negri bodies may not be present or are hard to detect.

It is really a controversial problem, whether to give treatment to a person who has been bitten by a proved rabid dog but has escaped infection for a long time, *i.e.*, a year or more. It is pertinent to point out that cases developing rabies after a prolonged incubation period, the longest being 3 years and 2 months (Iyengar, 1935) have all undergone partial or full antirabic treatment. As has long been recognized, in the case of persons developing rabies one to two years after being bitten by a rabid dog, it becomes almost impossible to exclude a second, more recent exposure (possibly a minor wound) which is often forgotten because it had been produced by an animal not obviously ill. Since there is always the possibility of paralytic accident, treatment, more than six months after exposure to known infection, is not recommended because, in such cases, the chances of developing rabies are more remote than those of paralytic accident.

Persons who have undergone a full course of antirabic treatment and have again been bitten by a rabid dog; the W.H.O. Expert Committee at their meeting held at Geneva in April, 1950, recommended that, in the event of a second exposure to infection within three months of previous treatment, no further treatment be given unless the second exposure consists of multiple bites, bites on the head, face, neck, or a severe lacerated wound. If treatment is indicated only two boosting doses of 7 c.c. each at weekly intervals should be given. Similarly for any bite by a rabid or suspected rabid animal, occurring from 3 to 6 months after previous treatment, two reinforcing doses of 7 c.c. each at weekly intervals should be given. This is an eminently sensible suggestion. Even though the level of immunity might drop with the passage of time it can always be boosted by a "recall" dose.

The problem of control and eradication of rabies in this country is a stupendous one. Every year nearly 100,000 people undergo antirabic treatment and the number seems to be going up. It is not even remotely possible to assess the number of live stocks lost by this disease and money spent on antirabic treatment runs into lakhs of rupees. An important measure to control the disease is protective inoculation of all pet dogs and destruction of stray animals. With the 6 per cent antirabic animal vaccine, manufactured at Kasauli, the recommended dosage is 10 c.c. for 7 days for big dogs and 5 c.c. for 7 days for smaller ones. But for a nationwide drive to protect dogs, from an administrative and economic point of view this is an impractical method. Though Umeno's single shot 20 per cent vaccine fell into disrepute, Kelsers chloroform vaccine when tested in dogs gave high degree of protection to experimental infection. Jhonson (1945) has shown that 20 per cent Semple vaccine given in a dose of 5 c.c. is an effective immunising agent when tested in dogs and he has also shown that the immunity produced by a single injection of the vaccine persists for at least a year. This is the method now accepted by the Public Health Deptt. of the U.S.A. with excellent results. This type of vaccine would obviously be the one of choice for large scale trials in this country. Recently a lyophilised live virus vaccine from egg embryo (Fleury's egg adapted strain) has been introduced in America and is undergoing field trial in Israel. The attraction is the low cost of production but the technical difficulties regarding the stabilisation and viability of the virus have to be overcome and it will be some time before it becomes a practical proposition in this country.

About the question of infective period of a rabid animal the expert committee on rabies of the W.H.O. are of opinion that a biting animal, particularly the dog, need be observed only for ten days, since it is extremely rare for an animal even to survive for five days after the onset of symptoms. It is also very rare for the animal to excrete virus for more than five days before the onset of symptoms; usually the virus can be recovered only a day or so before the onset. The few cases quoted in literature where the virus was "recovered" 7 to 12 days before the onset of symptoms are pathological curiosities which occur so rarely that from a practical point of view they may be sefely disregarded. Hence an observation period of ten days is really sufficient. But a word of caution here. If a person is bitten on the head, face or neck or has severe lacerated or multiple wounds it is unwise to delay treatment, since the incubation period in such cases is likely to be short, in case the dog does prove rabid under observation. Accordingly in such cases it is better to give three injections of 10 c.c. each, and then await the result of the observation for 10 days and give the rest of the 11 injections if the animal proves rabid. (W.H.O. Expert Committee recommendation).

Full and up-to-date information regarding rabies and anti-rabic treatment in India is to be found in a recent publication, published under the auspices of the Pasteur Association of India and available at a cost of Re. 1/- from

the Director, Central Research Institute, Kasauli. Medical Officers throughout India are strongly advised to obtain and study this booklet which deals in eminently practical terms with the subject. I am etc.

Central Research Institute, Kasauli, Pepsu. — A. K. THOMAS,

REFERENCES

JHONSON, H. N.—Proc. 49th U.S. Livestock San, Assn. pp 99-107, 1945.

IYENGAR, K. R. K.—*Indian M. Gaz.*, **70** : 562, 1935.

Ayurvedic drugs, for want of proper research, have been gradually receding from public support. The system of treatment has a large number of votaries but the real cause of its failure in effecting cure is due to the confusion regarding the identity of the source plants.

This small volume deals with ten different plants. Plates showing the colour, health and growth of the plants have also been given. The series when complete is expected to contribute to the resuscitation of Ayurveda from its present static condition.

The university of Travancore is to be congratulated for undertaking this work.

S.

## REVIEWS

PRIMARY ANATOMY—By H. A. Cates, 1951, Second Edition; pp. X+344, 405 illustrations. London: Bailliere, Tindall & Cox., Price 46 s. 6 d. net.

The book is primarily written to meet the requirements of non-medical students like physiotherapists, physical educationists, nurses etc., and to provide for them a basic knowledge of human anatomy as is necessary for such courses of studies. The subject matter is divided into 12 chapters, covering the entire course on a systemic basis, eliminating all unnecessary details of topographical anatomy but covering all its important aspects. Special stress has been laid on the locomotor system, specially the muscle action and gross general outline of neuroanatomy treated from a functional standpoint. The non-inclusion of "Blood" (a circulating connective tissue) in the chapter dealing with classification of tissues is a notable omission. The author with his wide experience has presented in a masterly way all important aspects of human anatomy in clear simple language correlating structure with function as far as practicable which is the special feature of the book. The illustrations in black and white are excellent specially the chapter dealing with muscular system. This book besides meeting thoroughly the requirements of those for whom it is meant, will form a very useful preliminary reading for the new entrants of the graduate medical course and will make additions of further details much easier. To state briefly it is a very useful book with clear presentation, vivid illustrations excellent get up and binding for which every one concerned should be congratulated.

P. BOSE.

PHARMACOGNOSY OF AYURVEDIC DRUGS—First series, pages 41. Published by the Central Research Institute of the University of Travancore, 1951.

This is the first instalment of a series on pharmacognosy of Ayurvedic drugs, publication of which has been undertaken by the Central Research Institute of the University of Travancore. This book contains detailed investigation and study of a number of source plants, from which Ayurvedic medicines are prepared. The morphological and anatomical details of the official part or parts have been described and illustrated with colour plates. The chemical constituents of the drugs have been worked out in cases where the source plants are confusing due to divergent names. This has ensured correct identification of the plants. This study entailed enormous efforts and due to the unfailing earnestness in the work, the identity of the plants dealt with in this book has been fully established.

## YOUR QUESTIONS

*Correspondents should give their names and addresses (not necessarily for publication) and include all relevant details in the questions which should be typed. Questions of medical interest only will be acceptable for this section. They should be sent in a separate envelope marked "Your Questions." Questions of general interest will be published in preference. Lack of space precludes answering all the questions received.*

**Q.** 1. Intravenous iron is being used in a large number of cases. No doubt it is efficacious. But as the fluid may be very dark and the initial dose may be small in quantity it will be very difficult to make out whether we are in the vein or not and as the same has got to be injected very slowly and the fluid is very small in quantity, that also is difficult. Can we mix it with any other fluid, such as glucose solution, distilled water or any other fluid, to enable us to know that we are in the vein and as the quantity will be more, to inject slowly.

2. What is to be done to get rid of ankylostoma and round worms in a child of 2 years which has cirrhosis of the liver, as santonin and carbon tetrachloride are contraindicated?

**Ans.** 1. The colour of intravenous iron is almost black and no difficulty has been experienced by us in differentiating it from blood. It is not at all difficult to inject 5 or 10 c.c. of fluid slowly. But the drug may be diluted with glucose or saline solution. We have found no harm coming from it. No untoward reaction has been noted. In case of allergic reaction, usual treatment with adrenaline, hot water bottle etc., should be resorted to.

2. Hexylresorcinol compound crystoid should be the best anthelmintic for such a patient.

**Q.** 3 (*a*) If a congenital syphilitic child sucks the breast of a healthy woman, does that woman get syphilis?

(*b*) Is syphilis a curable disease?

(*c*) When a healthy person goes to a syphilitic woman with a condom (male sheath), does that person get syphilis?

**Ans.** 3 (*a*) The healthy woman does not *always* get the infection but may, if any scratch occurs in the skin of the breast.

(*b*) For all practical purposes, the answer should be 'yes.'

(*c*) Theoretically, the answer should be in the negative but in the Army it was not found to be a safe method of anti-V. D. procedure, as condems are very unreliable so far as their integrity is concerned.

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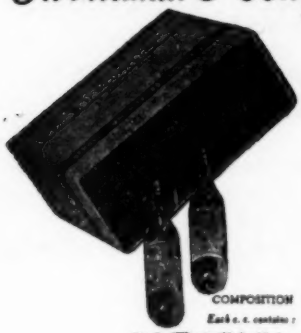

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| Calcium Pantothenate | ... | 3 mg. |
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| Potassium Glycerophosphate | ... | gr. 4 |
| Calcium Glycerophosphate | ... | gr. 4 |
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# SUPPLEMENT

## Journal of the Indian Medical Association

VOL. XXI. NO. 11 CALCUTTA AUGUST, 1952

## RECOMMENDATIONS OF THE INDIAN MEDICAL ASSOCIATION

### ON

### INDIA'S FIRST FIVE YEAR PLAN

*(Draft outline Report published in July 1951)*

#### INTRODUCTION

Although Chapter 15 of the Planning Commission's Report specifically deals with health, the materials contained in chapters 5 to 20 have to be considered together in making a social approach to health. The objectives have been stated more aptly in the abridged brochure wherein it has been stated that "social services included everything that contributes to the welfare of the community, such as education, health, the uplift of the backward and the underprivileged, and schemes for removing the disabilities of women, children, the youth, the deaf, the mute, the maimed and the vagrant."

It is an acknowledged fact that the health status of the population depends for 70 per cent of its progress on suitable living and working conditions. The minimum requirements for a hygienic standard of living are, in order of priority, food, shelter, clothing, education, health, social security, cultural recreation and integration of the self. A planning which does not take note of these requirements and actually incorporate them in the programme, can hardly be called a national planning. The object of planning should be not merely to cure disease but to prevent it by creating such living and working conditions as would make the incidence of illness rare. In most parts of the report, several health principles have been stated but there is hardly any indication of an integrated approach and yet Rs. 83·6 crores have been ear-marked for certain disjointed projects which hardly form parts of a cognate whole. The Association however, is of opinion that the scheme of community development projects is a step in the right direction.

The development of health and social services must have a *social objective*, the graded steps in planning must be component parts of the great master plan for the whole country and they must be executed simultaneously in harmony and unison. The federal plan must be linked with that of the constituent States in such a way that the whole country makes an advance and reaches the target through each successive 5-year plan.

#### EXPENSIVE INSTITUTES AT DELHI

The Association regrets to note that, in the Commission's recommendations, no attempt has been made to produce a *plan* based on the principles enunciated above but rather disjointed endeavours have been made to level up and create certain Central Government and State institutions. For example, it is not understood how the establishment of only one *All-India Medical Institute* at a cost of Rs. 170 lakhs is going to supply the teaching personnel required for at least 30 medical colleges. All the money allotted for this purpose should be utilised for developing post graduate departments in medical colleges in India on a zonal basis by providing them with adequate equipment and staff. Similarly, it is not clear how the upgrading of a *Chest Institute* at the Delhi University at a cost of Rs. 13 lakhs is likely to help in the planning of public health during the first 5 years. The development of a Chest Clinic can be best done as a separate unit of the Irwin Hospital. Anti-Tuberculosis centres already exist in Delhi on a large scale. Large parts of India require to be provided with such centres. New centres therefore, should be located in other States keeping in mind the necessity for training, besides medical men, other ancilliary anti-tuberculosis personnel. Instead of spending huge amounts of money on buildings for one Nursing College in Delhi, part of these amounts should be spent in starting nursing college in other parts of India and developing the existing ones and thus increasing the training facilities.

#### HOUSING

The Association feels that it should be the duty of corporations, municipalities, industrial concerns etc., to provide suitable quarters for at least its low paid servants and also to give grants and allowances for the construction of houses. It is felt that a practicable solution may be to grant house sites free of cost or at concessional rates and grant interest free loans repayable in easy instalments through Housing Co-operative Societies. 15 per cent of the employees' earning has been suggested as house rent. This is too much. It should not exceed 10 per cent in any case. Even at Chittaranjan colony the Government charge Rs. 3/8/- per month or 10 per cent whichever is less.

#### HEALTH EDUCATION

The Association fully endorses the emphasis given to health education, but feels that the instruction in health education should not be an addition to the already over burdened curriculum. Unless the teaching of hygiene is given a practical bias it will be a waste of time and effort. Also it is equally important that the subject should be taught by persons who themselves know what they are teaching, which is not unfortunately the case in many instances, at present. There are text books which have obviously been written by persons who are so ignorant of the subject dealt with that they have included fat among protein foods and the teachers teach the same. With the present shortage of qualified medical practitioners it will be impossible for years to come, for school medical inspection to be systematically carried out by qualified medical practitioners. But much of the work which a school medical officer is expected to do like recording of height and weight etc., can be done by a teacher trained in hygiene who need only refer to the medical officer of the school those students who in his opinion deserve examination by the doctor.

Health education must form an important component of literary and social education. The initiative of the people is stimulated thereby. The Association wishes to draw the attention of the Government to its efforts in this direction by publishing an attractive lay health journal in English by the name of *"Your Health"* which may be profitably made use of by the Central and the State Governments. If adequate Government support be forthcoming, the Association would be encouraged to publish the monthly health journal in Hindi and other regional languages.

#### FOOD

In order that India may attain self-sufficiency in food at an early date, the Association urges on the Government to strictly adhere to their programme of irrigation projects during the next five years, even if sufficient money be not forthcoming for all other projects.

The Association demands that a *comprehensive food Act* be passed into law and provision be made in the Act for inflicting deterrant and exemplary punishment on the perpetrators of malpractices affecting the purity of articles for food

and drink. The Association feels that the Government should start a net-work of model agricultural farms throughout the rural areas not only to demonstrate the improved methods of agriculture but also to find out the cost of production of food materials in different areas.

In view of the increasing use of *public catering* among the industrial and urban population, it is necessary that this should be placed on a more scientific and hygienic basis.

### Drug and Allied Industries

Adequate attention should be paid to plan the further development of the *pharmaceutical-chemical industry* and to the *manufacture of medical instruments and appliances*. Without the development of the basic chemical industry and chemical engineering and removal of certain excise and customs barriers, the manufacture of chemotherapeutic drugs cannot be made successful and supplied at a competitive rate to the whole population. There is no indication of the planned implementation of the provisions of the Drugs Act of 1940 and the Pharmacy Act of 1948. The subject of manufacture of instruments and appliances, like operation theatre equipment, dental chairs, microtomes, microscope, optical lenses, x-ray machines and x-ray tubes, x-ray films etc., have been altogether omitted. Any planning for a vast country like India must aim to make her self sufficient with regard to essential drugs, and scientific appliances, in order not only to supply things at cheap price but also to save dollar and sterling expenditure.

We regret to note that no planned development in the study of indigenous drugs and medicaments has been envisaged.

### Family Planning

The subject of *family planning*, based on certain hypothetical assumptions has been given a prominent place, allocating Rs. 25 lakhs for the purpose. It is well-known that in the advanced countries of the world people only realised the necessity of birth control and practised it with the improvement in the standard of living and education.

If a plan for implementing a scientific scheme of family planning is expected to attain any success, every hospital in this country should have a department attached to it to give necessary instructions to the people on the subject.

### Public Health Act

The Association requests the Government to formulate a definite programme for epidemiological control of diseases, extension of protected water supply, planned control of communicable diseases, control of rodents, correct registration of births and deaths, hospital plannisg, introduction of a code of health legislation (Public Health Act), comprehensive social insurance legislation and planned production of technical personnel in terms of the requirements of the federal and peripheral units. In this connection the Association requests the Government to discourage further development of unduly large cities.

### Health Plan and Communications

The inter-linking and *co-ordination of urban and rural health plans* have not been indicated in the report. The *development of communications* is not only of importance in reaching medical aid to rural areas but also for co-ordination and technical supervision of the various schemes in operation, besides being a valuable factor in the economic uplift of the community. The Association is amazed to note that even the "Nagpur Plan," which is far too modest in respect of development of rural roads, is being shelved on the ground of paucity of funds.

The subject of urban health has almost been skipped over. The Government will be well-advised to extend the health insurance scheme to the non-industrial urban areas.

### Health Plan and the Medical Profession

The *co-operation* of the *medical profession* has been sought for at every stage of the progress by the Government in other countries but not so in India where the Government have been accustomed to work in isolation. The Association wishes to make it clear that the employment of staff, who have not been trained in modern science, in the execution of any part of the health programme, would be a retrograde step and not in the best interests of the people.

### Conclusion

The Indian Medical Association wishes to point out that no provision exists for a periodic appraisal of the progress in the execution of the plan. The Association requests the authorities concerned to re-cast the whole scheme in the light of the above observations and constructive suggestions.

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## V ORISSA MEDICAL CONFERENCE

*Berhampur* (Ganjam)

Dr. P. Satyanarayana, the president of the conference, in course of his address said:

From year to year, the many problems confronting the Indian medical profession have been discussed through many platforms provided by the I.M.A. organisation. Following the practice I venture to discuss on some of them in my own way.

### Food Problem

Firstly, let me take up the most pressing problem that has been worrying our countrymen, namely the scarcity of food. The medical profession in particular is specially interested in the food supply to the people. Due to various causes and conditions operating in the country food production is inadequate and the people are not able to provide themselves with their ordinary nutritional requirements and the result is malnutrition. Unless this problem is tackled from all fronts, by the Government and the people, the medical profession will soon be confronted with dreadful nutritional diseases which will be beyond their power to heal and which ultimately may prove to be a national castastrophe. The *modus operandi* of increased food production must be left to the administrators and agriculturists.

### Public Health

No country stands more in need of public health measures than ours. Going through the Bhore Committee's Report published in 1946, one will be aghast at the gloomy picture of the conditions prevailing in our country. The Committee recommended that the Government should give a top priority to the pressing needs of Public Health.

In my own humble way, I may add that both at the Centre and in the States the Governments would be doing justice to themselves and to the people if they accept and implement the recommendations of the Bhore Committee in the light of the present day conditions. Medical profession will be solidly behind them. It is gratifying to note that, the Central Government and some State Governments have started implementing a few of the recommendations. Efforts are being made to tackle the problems of tuberculosis, leprosy, venereal diseases and malaria. Whatever may be the financial position of the State, it has to be admitted that preservation of health deserves immediate consideration.

### Rural Medical Relief

I offer no apology to reiterate the oft quoted statement that the health and happiness of our villages are miserably neglected in as much as they are entirely left to the tender mercy of village vaidyas and quacks. Unless quick and effective measures are taken to adequately meet the health needs of the villagers we, as members of the society, will be failing in our duty to the society. As for the remedial measures, they need no repetition, since such measures as suggested by eminent experts have been before the leaders of the country for a long time.

In this connection allow me to draw your attention to a comprehensive scheme of Rural Health Service drawn up by two Civil Surgeons of Orissa. The scheme was put up before the 4th Annual Orissa Medical Conference at Cuttack. It was subsequently adopted by the Orissa Provincial Branch of I. M. A. and recommended to the Government of Orissa for implementation.

Some States like Mysore and West Bengal have taken an initiative in this direction. In a recent speech the Director of Medical Services, Madras stated that the Madras Government are very soon going to launch a scheme for rural public health.

DR. P. SATYANARAYANA, PRESIDENT, ORISSA STATE BRANCH OF I. M. A., BERHAMPUR

### MEDICAL EDUCATION

It was the unanimous recommendation of the Bhore Committee that there should be only one standard of medical education in the country and that should be the degree course, the M. B. B. S. of the recognised Universities. But some States, have introduced a hybrid system of medicine which is neither allopathy nor indigenous. No doubt, any system of medicine having scientific basis will be quite welcome to the society; but a half hazard combination of both may not prove successful, may be harmful to all concerned. Without any planning, this hybridisation is growing and we shudder to think where all this is going to. Quackery is rampant. I am sure that, with scientific education and its propagation, a day will dawn, when quack medicine will vanish from our country. Some are of opinion that by legislation we can put an end to quackery; but it will more likely result in the creation of strong opposition based on sentiments, traditions and superstitions. We have to reconcile ourselves to the painstaking long and tedious process of slow education. It should be the duty of the State to see that the interests of the registered medical practitioners are guarded against unwholesome competition by unauthorised persons.

As we are advancing both in civilisation and scientific outlook, there has been fortunately an increase of scientifically minded people in the country. Comparing the period twenty years back with the present times, we find that there has a vast change in the outlook of the people at large in their eagerness for scientific medical treatment. There is a very great demand for qualified medical men and medical women. As such, there is the want of many more medical practitioners. We have to increase their production to meet the needs of the people and the State. I do not agree with those who say that there is very little attraction for the medical practitioner in service, and much less in private practice. This might have been true some decades back, but not so now. In my own humble opinion there is a bright future for the medical practitioner, and there is ample scope for work and research. In these circumstances we have to strive to increase the scope of medical education in the State. With the limited resources I would not venture to suggest for a second medical college, but I would like that the present number of students in the medical college at Cuttack may be increased, and simultaneously we have to augment the strength of the staff and hospital beds too.

### OUR STATE

Our State of Orissa has an area of 60,136 sq. miles and possesses a population of about 1,46,45,946 with 39 towns and 45,427 villages.

According to the Bhore Committee's recommendations, there should be one qualified doctor for every 2,000 persons. Working on that basis, we need more than 7,000 qualified doctors to cater to the needs of the people of our State. Perhaps this figure looks very oddly exaggerated. But that should be our aim, our target to reach as soon as possible.

### TUBERCULOSIS

Compared to the last two decades one will be surprised to see how rampant the disease is now; the toll of tuberculosis at present is collosal indeed. Unless speedy measures to eradicate the same are taken, on a large scale basis, I need not dilate on the gloomy picture it would be for the country. In this connection I would like to emphasise the need for early introduction of the scheme of B. C. G. vaccination. I am glad to note that our Government are making efforts to extend the scope of this scheme to the whole State.

### MALARIA AND FILARIASIS AND LEPROSY

These are our special problems. Many Suggestions have been given in the past, but practically very little is being done. No pains should be spared to tackle them and ample measures have got to be taken to control them.

### DENTISTRY

I need not emphasise to you about the present day status of this specialised subject, as this has come to occupy a very important place in all advanced and civilised countries. But unfortunatly it is in a sorry state in our Country. I trust that the recent Dental Registration Council Act will be a forerunner of a better state of affairs in near future.

### MATERNITY AND CHILD WELFARE

It is very unfortunate that in our country the maternal and infantile mortality is very high. If the medical and health advisers of the State take more interest with regard to this problem, I am confident this can be minimised to a great extent. It is only by taking into consideration the health of the expectant mothers that we can build up a healthy nation. The establishment of maternity and child welfare centres on sound and standard principles is certainly urgently called for.

### HEALTH OF SCHOOL CHILDREN

The school children are the hope of the future. Hygiene has got to be taught to them. Periodical inspection of the school boys by medical examiners must be set up and any defects so found should be promptly intimated to their parents so that they may take the necessary precautions and the remedial measures should be taken by the state agencies Health in our State is extremely inadequate and unsatisfactory. The rural medical officer in charge as suggested in the rural medical scheme should take care of the school children in his locality.

### DRUG INDUSTRY

I should like that each State in our country should have at least one drug industry sponsored on co-operative basis by the State Government, so that spurious and unauthorised drugs may not flood the market. In this connection it is heartening to note that in close co-operation of the World Health Organisation and the U. N. I. C. E. F. the Government of India have decided to put up a factory for manufacture of penicillin at Pimpri near Poona.

### OUR STATE BRANCH OF THE INDIAN MEDICAL ASSOCIATION

I am sorry to say that many medical practitioners of our State have not yet enrolled themselves as members of Indian Medical Association, perhaps under the notion that no useful purpose would be served by such enrolment. I would like to impress upon them that this organisation is the most representative national organisation of the medical profession in India. It is a member of the World Medical Association. It is only through such an organisation that we can put forth a united front to uphold the dignity and decorum of our profession. This organisation has got a great part to

play in the matter of public health. The present membership in Orissa is not discouraging, considering its age, and I am sure that one and all of you would try your best for the betterment and future prosperity of this great national organisation.

**ASANSOL BRANCH**—The annual general meeting of the branch was held on 30-3-52. Dr. D. Banerjee was in the chair. Discussions were held regarding the holding of a local conference at Asansol. Office-bearers for 1952-53 were elected with Dr. Bibhuti Bhusan Gupta as president and Dr. Hari Narayan Mukherjee as secretary.

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A meeting of the branch was held on 21-5-52 with Dr. D. Banerjee in the chair. The members condoled the sudden death of Dr. Bholanath Roy, the president of the branch on 13-1-52. A copy of the condolence resolution was sent to the bereaved family.

**BENGAL PROVINCIAL BRANCH**—A rural medical conference was held on 20-4-52 at Chandra Kona Road, in the district of Midnapore. Dr. P. K. Chatterje with Dr. A. K. Sen, Dr. N. N. Munshi, Dr. R. Sinha, Dr. B. Banerjee, Dr. G. Panja and Dr. P. K. Roy Chowdhury of Calcutta attended the conference. Dr. A. K. Bose presided. Dr. S. C. Roy, the chairman of the Reception Committee cordially welcomed the visitors, Dr. K. P. De, the Organising Secretary of the conference in a speech appealed to the profession to strengthen the Association and appealed to its leaders to establish closer contact with the rural practitioners. Dr. De also drew the attention of the conference to the various problems, their relation with the society and the deplorable condition of rural health and medical relief. He was of opinion that provision of X'ray clinics in every thana was one of the best means for early diagnosis and prevention of tuberculosis.

Dr. A. K. Bose, the president of the conference said that medical problems can not be kept isolated amongst the profession only without serious set back to its proper solution, as such, a wider platform must be created to receive co-operation from all other social units. He said, directives of science could only be our measuring stick even if they be contradictory at times.

He also said that though science has progressed the society unfortunately remained in the different stages of development; what with this and what with the progressive socio-economic structure of present day society, a suitable atmosphere for the growth of charlatanism and quackary has developed. The remedy, he suggested, was to remove the lag between the scientific development and its social application and that according to him could not be effectively materialised, even in the remote future, without medicine being socialised in a form suitable to the "local soil".

As a temporary measure, he suggested, that "rural medical centres" with reference library and clinical laboratory could be started in the rural areas on a co-operative basis. This "rural medical centres" is to provide, in co-operation with other social units of the area, all preventive measures for the local population including preventive medicine, school hygiene, antinatal clinics and health measures in general. I. M. A. could help such centres with specialists' help, including arranging refresher course etc. Scientific subjects were also discussed in the conference: 1. A symposium of Delayed Labour was opened by Dr. Ranajit Sinha, Dr. R. Banerjee, Dr. K. P. De and Dr. S. Hazra and others participated in it. 2. A learned discourse on Leprosy was given by Dr. G. Punja. 3. A discourse on Early Diagnosis and treatment of Pulmonary Tuberculosis was presented by Dr. P. K. Chatterjee.

**BENGAL PROVINCIAL COUNCIL**—The first ordinary meeting of the Council was held on 17-1-52 with Dr. J. C. Banerjee in the chair. Twenty-six members were present. At the outset the members condoled the death of Dr. Radhashyam Chowdhury of Calcutta and Dr. A. C. Bhattacharya of Nabadwip. The formation of new local branches at Jadavpur and Tollygunj was approved. Twenty-one members (except the ex-officio members) were elected to the working committee. Different standing committees were formed. The powers of the Bengal provincial council was delegated to the Working Committee with certain reservations. The resolutions passed at the last Provincial medical conference were referred to the appropriate standing committees. A selection committee was formed with the president, secretary, Dr. N. Munshi, Dr. R. Sinha and Dr. A. K. Bose for the purpose of interviewing and screening of candidates in connection with the residencies for young Indian Doctors in hospitals in U.S.A. and Canada. Regarding the proposed change of rules drafted by the Ad hoc committee, it was decided to request the central council to postpone its consideration at Ahmedabad for shortness of time.

**BENGAL PROVINCIAL BRANCH**—The second meeting of the working committee was held on 27-11-51. Dr. A. C. Ukil presided. Eighteen members were present. The committee condoled the death of Dr. Satindra Nath Bose (Calcutta) and Dr. Bhamini Ranjan Chaudhury. The house approved the report of the Finance Standing Committee of the Bengal Provincial branch and recommended the budget estimates for adoption by the annual meeting of the Bengal Provincial Council to be held on 14-12-1951.

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An emergent meeting of the working committee was held on 2-2-52 with Dr. J. C. Banerjee in the chair. Seventeen members were present. The committee endorsed the resolution passed by the Bengal Provincial Council at its meeting held on 17-1-52 regarding the consideration of the proposed change of rules drafted by the Ad-hoc Committee set up for the purpose.

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The third meeting of the Working Committee of the branch was held on 13-3-52. Dr. J. C. Banerjee presided. Twenty-two members were present. The meeting condoled the death of (1) Dr. R. Bhattacharya (Kakurgachi) (2) Dr. Bholanath Roy (Asansol) (3) Dr. Sanat Kumar Roy (South Suburban branch) (4) Capt. J. C. De (Hooghly-Chinsurah). The house elected a sub-committee to prepare a report on the draft rules of the Indian Medical Association. To start membership drive and to popularise the Indian Medical Association, it was decided to hold the first rural medical conferences at Pandua on 9-3-52, the second at Tarakeswar on 13-4-52 and the third at Garbetta on 20-4-52. Dr. A. C. Ukil was unanimously selected to represent the I. M. A. in the Governing Body of the School of Tropical Medicine. The arrangements to be made regarding the reception of delegates to the 4th Commonwealth Conference were discussed.

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The fourth meeting of the Working Committee of the branch was held on 22-4-52. Seventeen members were present. The house approved the formation of four new branches at Dautan, Kharagpur, Ramjibanpur and Cooch-Behar. Eighteen branches were recommended to have free supply of British Medical Journal. The arrangements that were to be made in connection with the Refresher Course for the rural medical practitioners were discussed. It was decided to ask for a grant of Rs. 500/- from the centre for holding more meetings and conferences in the districts and rural areas.

Regarding the West Bengal Clinical Establishment Act 1950, it was decided to hold a protest meeting in co-operation with the Calcutta Branch of the I. M. A.

**BHOWALI BRANCH**—A meeting of the branch was held on 20-3-52, Dr. K. Chand presided. Some difficult cases of Pulmonary Tuberculosis were discussed.

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A meeting of the branch was held on 24-4-52. Dr. K. Chand presided. The clinical subject for discussion in the meeting was Current Literature on the Treatment of Plumonary Tuberculosis and most of the members participated in the discussion.

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A meeting of the branch was held on 11-5-52 with Dr. K. Chand in the chair. Seven members were present. The new draft rules were placed before the house and the secretary was asked to study them and put them before the next meeting.

**BIHAR PROVINCIAL BRANCH**—The 1st meeting of the branch was held on 18-5-52 with Dr. S. K. Ghosh Dastidar in the chair. A provisional Executive Committee of the

Reception Committee, was formed and all branch secretaries were requested to enrol new members by a special membership drive.

**CALCUTTA BRANCH**—The fourth meeting of the Executive Committee of the branch was held on 8-4-52. Dr. A. K. Bose presided. Seventeen members were present. The proceedings of the last meeting were confirmed and the statement of accounts for March 1952 was examined. Eight new members were enlisted. Report of the medico-political Sub-Committee was held over for discussion in an emergent meeting to be held later on. The report of the Leprosy Sub-Committee was approved. The meeting was adjourned to the 15th April, 1952.

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The adjourned meeting was held on 15-4-52. The letter of Dr. Souren Sengupta was considered and a resolution was passed expressing desirabity of holding investigation regarding the mode of teaching and its standard in the colleges in view of the recent result of the final M. B. examination. In another resolution, an impartial enquiry was demanded in the alleged bacterial warfare in Korea.

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An emergent meeting of the branch was held on 15-4-52. Dr. A. K. Bose was in the chair. Nineteen members were present. The report of the medico-political sub-committee was discussed and the questionaire was accepted with slight modifications.

**CHETTINAD BRANCH**—A meeting of the branch was held on 26-4-52. Dr. S. Subrahmaniam was in the chair. The insurance scheme for the I. M. A. members was circulated and a number of interesting case records were discussed. Two talkie films on Anaesthesia were also shown to the members.

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The monthly meeting of the branch was held with 45 members attending. Dr. Arunachalam delivered an interesting lecture on "Dyspnæ". There was also an interesting film show on "Spinal Anaesthesia."

**COIMBATORE BRANCH**—A meeting of the branch was held on 26-4-52. Dr. I. Pichai presided. At the outset the members condoled the deaths of Dr. K. N. Ramanathan and Dr. P. Varadarajan. The meeting congratulated Dr. U Krishna Rao and Sri A. B. Shetty on their appointment as Ministers and Dr. Y. P. Vasudevan on his assumption of office as the president of the South Indian Medical Association.

Dr. K. C. Nambiar gave an interesting lecture on "Advances in Neuro-Surgery".

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In a meeting of the branch held on 15-5-52. the members accorded welcome to Hon'ble Dr. M. V. Krishna Rao. Hon'ble Dr. Rao in his reply explained how the doctors could help in building up the national life of the country by applying their minds to the larger problems of health and social welfare.

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The monthly meeting of the branch was held on 21-6-52. Dr. I. Pitchai Robert presided. Resolution expressing deep sense of sorrow at the sudden death of Dr. U. Rama Rao one of the ex-presidents of the Indian Medical Association was passed. The members also condoled the death of Dr. M. M. Menon of Koduvayur. Dr. S. Subramaniam, Physician, General Hospital, Madras, gave a very interesting talk on Coronary Thrombosis—Diagnosis and treatment. Dr. Y. P. Vasudevan was nominated for presidentship of South Indian Provincial Branch of I.M.A.

**DHANBAD BRANCH**—A meeting of the branch was held on 15-5-52 with Dr. N. K. Prasad in the chair. Office bearers for 1052 elected with Dr. N. K. Prasad as president and Dr. R. C. Mukherjee as secretary.

**DUMKA BRANCH**—The following defaulting members of the Branch are requested to pay off their dues to the association at an early date.

1. Dr. Asok Kumar Bose; 2. Dr. Birendra Mohan Das; 3. Dr. B. C. Das Gupta; 4. Dr. D. N. Das Gupta; 5. Dr. A. N. Das; 6. Dr. Barindra Kumar Ganguly; 7. Dr. N. Mandal; 8. Dr. Amulya Nath Sen.

**DUM-DUM BRANCH**—At a special general meeting of the Branch held on Sunday the 20th April, 1952, in the premises of Messrs. Indian Health Institute & Laboratory Ltd., Dr. A. D. Mukharji, Editor of the Journal of the I. M. A. was felicitated on his unique success at the last general election to the West Bengal State Assembly. At this meeting presided over by Dr. B. C. Das, the 4 members of the Branch who were elected as commissioners of the South Dum Dum and Dum-Dum Municipalities were also congratulated.

At the annual general meeting of the Branch held on Sunday the 22nd June, 1952 with Dr. B. C. Das in the chair, a memorandum on the health conditions of Dum Dum and its neighbourhood was finally approved by the Branch.

Dr. B. C. Das and Dr. S. K. Bishnu were re-elected as the president and the secretary of the Branch for another year.

**ERODE BRANCH**—A clinical meeting of the branch was held on 14-6-52. The meeting was largely attended by local members and doctors from the muffasil stations. Major R. S. Rao of Coimbatore spoke on "Extra-Pulmonary Tuberculosis" which was highly appreciated.

**FARRUKHABAD CUM FATEHGARH BRANCH**—An emergent general meeting of the branch was held on 21-6-52 to express sorrow at the sad and sudden death of Dr. Amba Pershad, the president of the local medical Association and the senior most medical practitioner of the town. Though he was in the 72nd year, he was quite hale and hearty. His death is being mourned by every body of the locality.

**FAIZABAD BRANCH**—A meeting of the branch was held on 27-4-52 to bid farewell to Dr. Ved Ratna who had been transferred to Kanpur. Twenty-four members were present.

**FEROZEPUR BRANCH**—A Special meeting of the branch was held on 20-4-52. The president of the Punjab State branch spoke about the organisation and unity of the I. M. A.

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A meeting of the branch was held on 10-6-52. Dr. Raja Ram Bhola presided. Twenty-one members were present. Dr. C. P. Khanna spoke on "Urine in Health and Disease", the second series of the paper.

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A meeting of the branch was held on 8-7-52 with Dr. Raja Ram Bhola in the chair. Twenty members attended. Dr. P. L. Rai spoke on "Acute Abdomen and its differential diagnosis. Dr. Chowdhury also spoke on "Technique of Amputations".

**GHUGUDANGA BRANCH**—A meeting of the branch was held on 4-5-52 with Dr. S. N. Mitra in the chair. Sixteen members were present. Dr. D. N. Ganguly spoke on Psychiatry in General Practice which was followed by discussions.

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A meeting of the branch was held on 22-6-52. Dr. S. Sarkar presided. Thirteen members were present. At the outset, the meeting condoled the death of Dr. K. C. Chakravarty and Dr. U. P. Basu. Nominations for the president and Vice-presidents of the West Bengal Provincial Branch for 1952-53 and for the president and Vice-presidents of the I. M. A. for 1952-53 were made. The members also felt happy at the selection of Dr. A. D. Mukherjee and Dr. J. R. Dhar as Deputy Ministers to the West Bengal Government.

**JAGATDAL BRANCH**—A clinical meeting of the branch was held on 17-5-52 with Dr. N. L. Sur in the chair. Dr. A. B. Mukherjee spoke on "Respiratory Emergencies and their management".

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Another meeting was held on 10-6-52. Dr. R. A. Barlow was in the chair. Mr. N. Verma and Mr. D. K. Guho of the Employee's State Insurance Corporation spoke on "Employees' State Insurance Scheme".

**JEHANABAD BRANCH**—A meeting of the branch was held on 7-6-52 under the presidentship of Dr. R. K. Prasad. The secretary was requested in a resolution to enlist new members and doctors were requested to withdraw support from dispensaries run by quack compounders.

**JULLUNDUR BRANCH**—The following defaulting old members of the Branch are requested to kindly pay off their dues to the Association at an early date:—

1. Dr. Amar Chand (Nakodar); 2. Dr. Shyam Sunder (Civil Hospital, Dalhousie).

**KOTHAGUDIUM BRANCH**—Clinical meetings of the branch were held on 11-4-52, 18-4-52, 26-4-52 and 2-5-52. Dr. T. C. Ramchandani presided. The following subjects were discussed; (1) Bilateral Pleurisy and Spontaneous Pneumo Thorax (2) Diabetes (3) Spinal Injury (4) Anæsthesia.

**MADRAS BRANCH**—On the 16th January, 1952, Dr. Jeoffrey W. Rake, Director of the Squibb Institute for medical Research, New York gave an interesting lecture on "Newer Hæmatemic Factors", which was very much appreciated by the members. On 25-1-52, Prof. Arthur Stool, Founder of the Pharmaceutical Research Laboratories, Basle Switzerland spoke on "Ergot, its alkaloids and their application in Therapeutics" which was highly appreciated. On 5-2-52, Dr. J. M. Tripod, Scientific Research Department Messrs. Ciba Ltd., spoke on "Hormones and Vital Functions" before the members of the I. M. A., Madras Branch, Indian Pharmaceutical Association and the Royal Institute of Chemistry. On 21-1-52, Dr. M. Krishna Murthy of the Madras Medical College delivered a lecture of "Clinical and Operative Problems of the Enlarged Prostrate" Major K. N. Rao, of Tuberculosis sanatorium, Tamtaram, on 28-1-52 spoke on "Current Trend in Tuberculosis Control and Therapy". His lecture was very much appreciated.

**MADURA BRANCH**—A meeting of the branch was held on 16-2-52. Dr. K. S. Krishnan, delivered an interesting lecture on the anatomy and the operative treatment of Uterine Prolapse.

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The annual meeting and the annual conference were held on the 1st March, 1952. The budget was presented and passed. New office-bearers were declared elected. A clinical section was also organised. Dr. Mahammad Ismail, presiding over it. Dr. A. N. K. Menon, spoke on " Modern Trends on the Radio-Diagnosis of Diseases of the Chest " and Dr R. E. S. Muthvya, on " The Role of the general Medical Practitioner in Ophthalmology."

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In a meeting of the branch held on 19-4-52 with Dr. M. N. Rajan in the chair, Dr. K. Umapathi spoke on "Some Common Acute Abdominal Emergencies". The secretary of the branch appealed to members to support the new journal of I. M. A. entitled "YOUR HEALTH".

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A meeting of the branch was held on 22-5-52 with Dr. M. N. Rajan in the chair. The members condoled the death of Dr. U. Rama Rao.

An interesting lecture on "Some Common Ear Nose Throat Affection was given by Dr. K. S. Narayanan.

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A meeting of the branch was held on 24-5-52 with Dr. M. N. Rajan in the chair. The members condoled the death of Dr. U. Rama Rao. Next Dr. K. S. Narayanan spoke on Some Common Ear, Nose, Throat Affections which was highly appreciated.

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An extra-ordinary general meeting of the branch was held on 21-6-52, Dr. M. N. Rajan presided. Nomination for the presidentship and vice-presidentship of the South Indian Provincial branch were made. Dr. N. R. Subramanyan gave an interesting lecture on Hepatic Cirrrhosis.

**MALABAR BRANCH**—A meeting of the branch was held on 25-5-52 with Dr. C. K. Menon in the chair. Forty-two members were present. Dr. T. Balakrishnan gave a lecture on Messenteric Occlusian, Dr. P. Balram on Vaginal Bleeding, Dr. C. K. Menon on Reversible Heart Disease, Dr. C. R. Parasuram on Drug Therapy in Coronary Diseases, Dr. L. S. Ramkrishan on E. N. T. in general practice and Dr. K. Seethraman on Treatment of Infantile Gastro Enteritis.

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A meeting of the branch was held on 26-4-52 with Dr. C. K. Menon in the chair. Forty members were present. In a resolution, the members congratulated Dr. U. Krishna Rao, on his appointment as a Minister in the Madras Cabinet.

**MEERUT BRANCH**—In a meeting of the branch held on the 26th February, 1952, the members condoled the sad and untimely death of Dr. Ved Prokash Gupta on the 21st February, 1952. A copy of the condolence resolution was sent to the bereaved family.

**MIDNAPUR BRANCH**—The annual meeting of the branch was held on 8-2-52 with Dr. B. N. Sinha, in the chair. Office-bearers for 1951-52 were elected with Dr. B. N. Sinha, as president and Dr. M. N. Dey, as secretary.

**NAGPUR BRANCH**—In a meeting of the branch held on 12-4-52, office bearers were elected for 1952-53 with Dr. B. K. Vinchure as president and Dr. A. M. Upasani and Dr. R. D. Dhusari as secretaries.

**PANDU THANA BRANCH**—The annual meeting of the branch was held on the 9th March, 1952 with Dr. J. N. Chatterjee, in the chair. Twentyone members were present. The difficulties due to the non-existence of a laboratory in the locality were discussed. A symposium on Malaria was read by Drs. J. N. Chatterjee, P. Ghosh, B. Roy, S. A. Rahman, and P. Chatterjee. Dr. N. C. Sen, read a paper on " Some Public Health Problems of Rural Bengal." Dr. S. L. Banerjee, discussed Pyrexia of unknown origin and Dr. S. A. Rahman, demonstrated a case of Poliomyelitis.

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The 3rd annual meeting of the branch was held on 9-3-52. Dr. J. N. Chatterjee presided. Twenty-one members were present. Dr. J. C. Banerjee, President, Bengal Provincial Branch was the chief guest.

The president in his address welcomed the guests and referred to the various problems of rural medical practice. Dr. J. C. Banerjee in his reply dwelt on the problems and gave his suggestions. The Scientific session consisted of a symposium on "Malaria in the locality" and Papers on "Some Public Health Problems of rural Bengal, Pyrexia of unknown origin and Poliomyelitis were read. There was a lively discussion of the subjects and Dr. J. C. Banerjee and Dr. H. K. Indra gave their valued opinion on the discussions.

**POONA BRANCH**—The quarterly report of the branch shows that monthly clinical meetings were held on last Thursdays every month and special meetings were held from time to time.

The following papers were read during this period: (1) Malaria and Antimalarials by Dr. R. V. Sathe, (2) Recent Advances in Pediatrics by Dr. Slot, (3) Pathogenesis of Epidemic Hepatitis by Dr. P. N. Wahi, (4) Nephritis by Lt. Col. P. V. Karamchandani, (5) Eye Camp at Pandharpur by Dr. D. G. Patwardhan, (6) Origin, manufacture and standardisation of penicillin, (7) Summary of Renal Hæmodynamics and up-to-date treatment of Bright's disease.

Dr. K. C. Gharpure is the president and Dr. M. R. Phadake, and K. N. Jejurikar, are the joint secretaries of the branch.

**PORBANDAR BRANCH**—A meeting of the branch was held on 23-3-52 with Dr. H. H. Chanda, in the chair. Nineteen doctors were present. Dr. M. N. Nanawati, read a paper on " Acute circulatory failure " and Dr. G. S. Shah, read a case report on " Filarial Scrotum." An X-ray film of the chest of a child of 2 years having extensive bilateral tuberculosis of the lungs was shown to the members.

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A meeting of the branch was held on 22-6-52. Seventeen members were present. Dr. B. D. Jhala read a paper on "Spleno Medullary Lukæmia". Dr. Chavda also spoke on the "Pathology and treatment of Lukæmia". A film of "Intragastric Dup therapy was shown to the members present.

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A meeting of the branch was held on 18-5-52. Shree Dayashankarbhai Dave, Hon'ble Minister for Health attended the meeting. Nineteen members were present. Dr. H. H. Chavda the president of the branch welcomed the minister and explained to him some of his experiences which needed his attention.

**PUDUKOTTAH BRANCH**—The annual meeting of the branch was held on 16-12-51 with Dr. R. Raghunathan in the chair. Office-bearers for 1951-52 were elected with Dr. N. G. Kamalamma, as president and Dr. N. Thiagarajan, as secretary. Major P. Govinda Rao, gave an interesting lecture on "Common affections of the male Genitals" and Dr. B. Jayaram on "Tuberculosis and its Modern Treatment."

**RANIGANJ BRANCH**—Dr. M. N. Ghosh breathed his last on 11-6-52. He was the vice-president of the branch from 1939-50 and president for the last one year and a half. His death is a great loss to the locality.

**SABARMATI BRANCH**—In a meeting of the branch held on 21-3-52, it was decided to start B.C.G. work in Sabarmati area. The membership of the branch has come up to eleven.

**SOUTH KANARA BRANCH**—A meeting of the branch was held on 19-4-52. Dr. K. R. Kini, was in the chair.

Dr. A. F. Coelho, gave a lecture on "The Diagnosis and Treatment of Leprosy." He made a detailed study of the disease from its origin to its present day treatment. The lecture was highly appreciated by all. There was a good attendance of members.

**SHIMOGA BRANCH**—A monthly meeting of the branch was held on 8-3-52. Dr. M. Shankarappa, presided. Dr. N. F. Mathias, discussed the subject of midwifery practice in rural areas—its limitations. Medical films on Anæmia and Penicillin in Medicine and Surgery were exhibited.

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Another meeting of the branch was held on 6-4-52. Dr. T. Prasannasimha Rao, presided. The following subjects were discussed: (1) A case report of a chronic congestive heart failure with interesting radiological findings by Dr Krishna Murthy, (2) Family Planning by Prof. Saldhana and Dr. C. P. Krishna Murthy.

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A meeting of the branch was held on 7-6-52. Dr. T. L. N. Pandit was in the chair. The following subjects were discussed: (1) Difficulties in the Diagnosis of Certain Acute Abdominal Catastrophes by Dr. T. N. Srinivasiah, (2) Pneumonias in summer by Dr. C. P. Krishnamurthy.

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The monthly meeting of the branch was held on 5-7-52 with Dr. Felix Misquith in the chair. Dr. T. N. Srinivasia discussed the subject of "Fundamentals that ought to be followed in the treatment of Fractures."

**SOUTH INDIAN PROVINCIAL BRANCH**—A meeting of the Council of the branch was held on 27-1-52. Twenty-three members were present. The members condoled the death of Dr. P. S. Varadarajan of Madras and Dr. Srinivasan of Trichy. A resolution was passed strongly recommending the inclusion of licentiates in the new Indian Medical Register and in a second one, the Government of India was requested to utilise the whole amount contributed by New Zealand under the Colombo Plan for postgraduate medical education only.

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A meeting of the Council was held on 11-5-52. Nineteen members were present. Condolence resolutions on the death of Dr. R. Krishna Iyer of Palladam and Dr. K. N. Ramanathan of Coimbatore were passed. The Council congratulated Dr. U. Krishna Rau on his appointment as a Minister for Industries, Dr. M. V. Krishna Rao, as Minister for Education in the Madras Cabinet and Dr. P. V. Cherian as Chairman of the Madras Legislative Council. The Sub-Committee's Report on the 5-year plan was recorded. Names of the four candidates selected for Residencies abroad were announced. Various proposals for increasing the membership strength of the I.M.A. were discussed. With reference to the circular of the Indian section of International Congress of Doctor, in the council's opinion, a separate association is not necessary and the I.M.A. can usefully undertake the task. The next meeting of the council was invited to Cuddalore.

**SURI BRANCH**—In a meeting of the branch held on 2-4-52, resolutions were passed to the effect that the West Bengal Clinical Establishment Act of 1950 should not be extended to institutions of Electrotherapy and Hydrotherapy and the Clinical laboratories should be excluded from the purview of the act.

**SIBSAGAR BRANCH**—The annual general meeting was held on 5-1-52. Eight doctors were present. Discussions were held regarding B. C. G. campaign and the enrolment of new members to the Association.

**TANJORE BRANCH**—The annual conference of the branch was held on 30-3-52. Dr. E. K. Menon presided. Dr. G. Samual spoke on Phrenic nerve avulsions, Major P. Govinda Rao, on Stricture of the Urethra and Dr. T. V Venkatesan on Recent Advances in Therapeutics. New office bearers were elected with Dr. N. R. Subramanian as president and Dr. S. Narayanan as secretary.

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A meeting of the branch was held on 27-4-52 with Dr. N. R. Subramanyan in the chair. Twenty-five members were present. Dr. V. Krishnamurthy gave a talk on "Pitfalls in the use of certain common drugs."

**TIRUNELVELI BRANCH**—A meeting of the branch was held on 29-12-51 with Dr. K. Rama Iyer, in the chair. Thirtyeight members were present. After the normal business was over, Dr. M. Viswanathan, read a paper on Criminal Psychology.

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A meeting of the branch was held on 29-3-52 at Tuticorin. Dr. K. Ramchandran gave a lecture on "Some Emergencies in Paediatrics".

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A meeting of the branch was held on 26-4-52. Thirty-six members were present. Dr. R. Gopalan read a short paper on "Cardiac Emergencies" which was very much appreciated.

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A meeting of the branch was held on 31-5-52. Thirty-two members were present. Condolence resolutions on the death of Dr. K. Govinda Iyer and Dr. U. Rama Rao were passed. It was decided to hold the South Indian Provincial Conference Council meeting at Courtallam in July. Dr. K. Chintan Nambiar was nominated president of the S. I. P. B. of the I. M. A. for 1952-53. Kumari C. F. Paul gave a lecture on Vesico-Vaginal Fistula.

**TIRUCHI BRANCH**—In a meeting of the branch under the presidency of Dr. R. Kalamegham, it was resolved to open a token fund in memory of late Dr. D. Srinivasan and to hand over the proceeds to the wife of the deceased. Dr. N. Vaidyanathan gave a talk of Dyspepsia.

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A meeting of the branch was held on 27-4-52 with Dr. R. Kalamegham in the chair. Fifty members were present. Dr. B. S. Viswanathan gave a talk on medical treatment of Pulmonary Tuberculosis.

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A meeting of the branch was held on 4-5-52 with Dr. R. Kalamegham in the chair. Fifty members were present. Dr. T. V. Venkatesar gave an interesting talk on some recent drugs and their clinical uses.

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A meeting of the branch was held on 1-6-52 with Dr. R. Kalamegham in the chair. After the normal business was over, Major N. Chandrasekavan gave a talk on local anaesthesia.

A meeting of the branch was held on 3-6-52. Dr. Kalamegham was in the chair. Fifty members were present. Dr. M. G. Kini of Bombay gave a talk on Rehabilitation of Crippled Children.

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Another meeting of the branch was held on 5-7-52. Dr. R. Kalamegham presided. Fifty members were present. After the normal business was over, Major P. Govinda Rau gave a lecture on Diseases of the Prostrates and their treatment.

**TINSUKIA BRANCH**—In a meeting of the branch, the half yearly report (October, 1951—March 1952) was presented. During the period 5 new members were enrolled and 3 meetings were held. Scientific subjects were discussed in every meeting. The Tea Garden Sub-Committee's recommendations on Tea Estates Doctors and the attitude of the I. T. A., were discussed.

**UTTAR PRADESH BRANCH**—The first meeting of the working committee of Uttar Pradesh State Branch Council for 1951-52 was held on 10-12-52 at Lucknow. Nine members were present. Condolence resolutions on the death of the following were passed: (1) Dr. Dadiq Ali, (2) Dr. I. H. Rizvi, (3) Dr. S. C. Sinha, (4) Dr. P. D. Gupta, (5) Dr. L. N. Mehrotra.

The secretary presented the annual report for 1950-51 and the audited annual accounts for the year which were unanimously adopted.

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The seventeenth annual meeting of the branch was held on 26-12-51 with Dr. Mrs. B. Thungamma, in the chair. Fifteen members were present. Election of office-bearers for 1951-52 was held. Dr. Mrs. B. Thungamma, was re-elected as president and Dr. H. N. Shivapuri, the secretary. The annual report for 1950-51 and the audited annual accounts for the same period were adopted. Dr. S. P. Mehrey, president, Sitapur Branch, invited the next U. P. Medical Conference to Sitapur which was unanimously accepted.

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The second meeting of the Working Committee of the branch for the year 1951-52 was held on 16-3-52. Dr. B. Thungamma, presided. Twelve doctors were present. At the outset, the members expressed deep sorrow at the sad death of (1) Dr. Niranjan Prosad, (2) Major S. R. Seth, (3) Dr. Ved Prokash Gupta.

Along with the normal business, the question of availability of services of private medical practitioners and the question of appointing honorary doctors in Government hospitals, were discussed. Regarding increase of membership, the secretary was advised to issue an appeal to the branches on the subject.

## APPEAL TO THE MEMBERS

1. *"YOUR HEALTH."*

A health journal meant for the lay people by the name of "YOUR HEALTH" is being published monthly by the Indian Medical Association from January 1952. The price of a single copy is twelve annas and the annual subscription is Rupees Eight only. It is hoped that every branch, member and subscriber will subscribe to this journal.

2. *I. M. A. BUILDING FUND.*

The Indian Medical Association has decided to construct a building for housing the I. M. A. at its head-quarters at Delhi. The Association needs about five lakhs of rupees for this purpose. This desire of ours can hardly be fulfilled unless the members of the Association individually come forward to subscribe to the funds which are being raised specially for this purpose.

May I take this opportunity to appeal to each member of Association to contribute liberally to this fund. The scheme might be realised if every member undertakes to contribute at least Rs. 50/- at a time or in instalments of Rs. 5/- per month.

Those members who have not yet contributed to this fund are requested to please send their contributions for this purpose by crossed cheques or postal orders drawn in favour of "Indian Medical Association-Building Fund" to the Hony. General Secretary, Indian Medical Association, Hanging Bridge, Daryaganj, Delhi 7, at their earliest convenience.

S. C. SEN,
*Hony. General Secretary,*
Indian Medical Association.

T. S. TIRUMURTI,
*President,*
Indian Medical Association.

LIST OF LOCAL BRANCHES, WHO HAVE CONTRIBUTED TOWARDS "I.M.A. BUILDING FUND"

| *S. No.* | *Local Branch* | *Membership strength* | *Amount Donated* Rs. A. P. |
|---|---|---|---|
| 1. | Nawadah ... ... ... ... ... | ... 14 | 35 0 0 |
| 2. | Khamgaon ... ... ... ... ... | ... 19 | 84 0 0 |
| 3. | Sholapur ... ... ... ... ... | ... 74 | 762 0 0 |
| 4. | Jalgaon ... ... ... ... ... | ... 34 | 204 0 0 |
| 5. | Barsi ... ... ... ... ... | ... 20 | 200 0 0 |
| 6. | Nizamabad ... ... ... ... | ... 22 | 100 0 0 |
| 7. | Deolali ... ... ... ... ... | ... 13 | 50 0 0 |
| 8. | Sundargarh (*Proceeds obtained by a Theatrical performance by doctors, nurses and other auxilliaries*) | ... 6 | 500 0 0 |
| | | Total | 1,935 0 0 |

**29TH ALL INDIA MEDICAL CONFERENCE, PATNA**—A strong Reception Committee for the 29th All India Medical Conference has been formed with Dr. T. N. Banerjee as Chairman and Dr. P. N. Sinha as General Secretary. Different Sub-Committees have also been formed. The Conference will be held on the 26th, 27th and 28th December, 1952.

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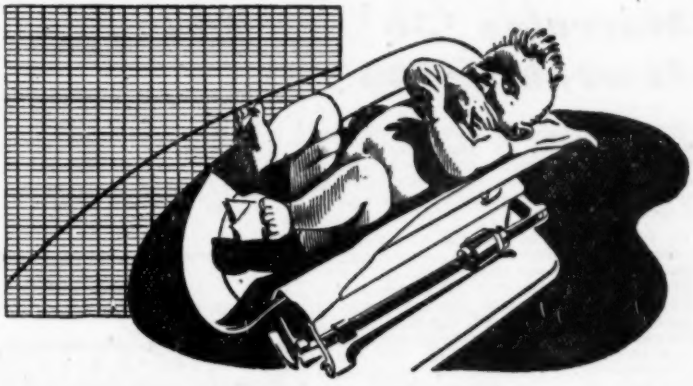

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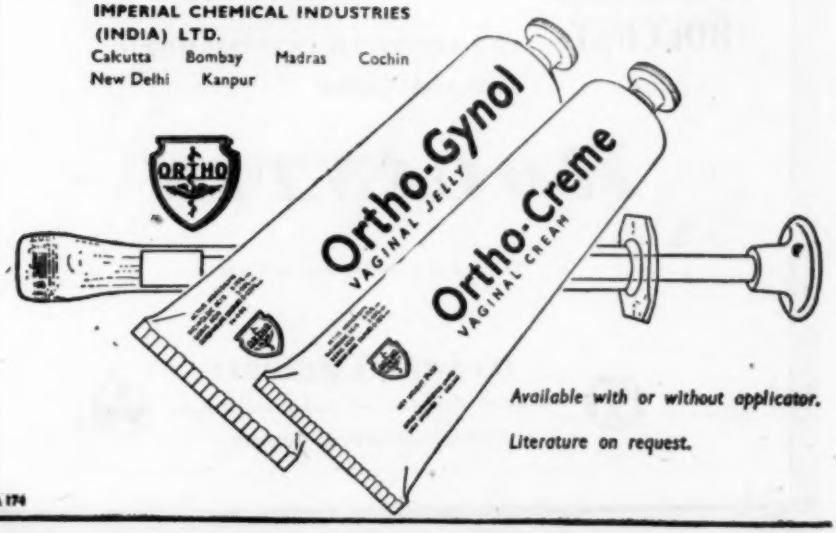


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